The HACKENSACK SCHOOLS

No. 2 NOVEMBER 1921

REPORT OF THE SURVEY OF THE PUBLIC SCHOOL SYSTEM OF HACKENSACK, NEW JERSEY

By GEORGE DRAYTON STRAYER AND N. L. ENGELHARDT

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REPORT

OF

THE SURVEY

OF

The Public School System

OF

Hackensack, New Jersey

BY

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AND

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JUNE, 1921

THIS SURVEY of the school system of Hackensack was prepared for the Board of Education at the request of the Board of Education and the Supervising Principal, Mr. William E. Stark. The survey was made under the direction of Dr. George Drayton Strayer, Professor of Educational Administration, Teachers College, Columbia University, New York City, and Dr. N. L. Engelhardt, Professor of Education, Teachers College, Columbia University, New York City. They were assisted in the work by Messrs. Guy C. Gamble and J. H. Holst, Associates in Educational Administration, Teachers College, Columbia University, and by Messrs. N. H. Dearborn, R. M. Magee, C. H. Thurber and J. W. Twente, students in graduate courses in Educational Administration in Teachers College, Columbia University.

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INTRODUCTION

HACKENSACK has an exceedingly well administered school system. Economy of management as far as it is consistent with securing good results is in evidence at every turn. Hackensack's children are being well taught and well trained and Hackensack's educational program is being as consistently advanced as constructive management, costs and the necessary experimentation will permit.

The direction of the public school affairs of this city is in the hands of an intelligent and interested Board of Education, which has very creditably performed its functions.

The adequacy of the training and experience of the supervising principal is evident in the success which is being achieved in every phase of administration and supervision.

The school plant has been efficiently planned and is exceedingly well maintained.

The detail of care observed in the management and control of school buildings, so that the comfort, safety and health of every child are adequately conserved, speaks well for the principals and the caretakers of the school buildings.

The school plant is overcrowded and the community must give its approval for the development of a school building program looking fifteen and twenty years into the future.

The teaching staff has been well chosen. Their training and experience are securing for Hackensack's children most adequate results.

The measurement of the achievements of children through standard tests shows that classroom instruction is such as to maintain very high standards.

Through observation of classroom teaching, it is clear that Hackensack children are being well trained not only in the formal subjects, but also in the qualities which tend toward good manhood, good womanhood and good citizenship.

Hackensack's teachers are being well paid as compared with other communities of similar size, but Hackensack's problem is to keep its well trained teachers against the greater inducements that are being offered by other larger metropolitan and suburban centers.

Hackensack's teachers are professionally-minded. They have kept in touch with modern educational developments and have incorporated those theories and ideals into their own practice where they have deemed it possible and desirable.

One of Hackensack's great problems lies in the needs of the children who transfer from other school systems to the local school system. Children who spend their educational lives in the Hackensack schools progress more rapidly than these other children.

The organization of education in Hackensack recognizes the need for variation in curriculum and in promotion to meet the needs of individuals.

Every part of the educational program advanced in Hackensack stands as an approved part of a modern school system and is in keeping with the progress that is being made in the other progressive cities in the United States.

The cost of education in Hackensack is high but not excessive. Hackensack's school system will rank among the foremost in the United States. In order to maintain this high standard Hackensack must continue to pay for the high cost of education.

The citizens of Hackensack may rest assured that their money is being spent wisely and will continue to be spent wisely under the direction and the management of the present Board of Education and its supervising principal.

GEORGE D. STRAYER,
N. L. ENGELHARDT.

August 31st, 1921.

TABLE OF CONTENTS

PART I.—THE ADMINISTRATION OF THE HACKENSACK SCHOOL SYSTEM.

PART II.—SCHOOL BUILDINGS.

PART III.—THE MEASUREMENT OF THE CLASSROOM ACHIEVEMENTS OF CHILDREN.

PART IV.—CLASSIFICATION AND PROGRESS OF SCHOOL CHILDREN.

PART V.—THE TEACHING STAFF—THE QUALITY OF INSTRUCTION AND THE COURSE OF STUDY.

PART VI.—THE COST OF EDUCATION IN HACKENSACK.

PART VII.—APPENDIX.*

* The Appendix, consisting of tables and charts giving detailed facts in regard to the individual schools of the Hackensack system, is not included in the printed report but is filed in the office of the Board of Education.

The Administration

OF

The Hackensack School System

CONTENTS

	PAGE.
The Administrative Organization,	9
Buildings and Grounds,	14
Office Management,	15
Records and Reports,	15
Annual and Monthly Reports,	16
School Manuals,	17
The School Budget and School Accounting,	17
Statistical Studies,	18
Supplies and Text-Books,	18
Attendance and Health,	19
The School Building Program,	19

CHARTS

	PAGE.
Chart 1.—Organization of Hackensack Public Schools,	12

MAPS

Map No. 1.—Map of Hackensack, N. J., Showing Location of Schools,	21

The Administration of the Hackensack School System

The administration of schools in Hackensack is of such a high order as to place this school system among the best administered school systems in the United States. In all matters of overhead management the Survey Commission has found the work done in a most satisfactory manner. The selection of an exceptionally strong teaching staff is proof of a high degree of professional skill and a thorough knowledge of professional requirements on the part of the supervising principal. The provisions made in the school plant, the types of equipment and the care and thoroughness used in maintenance of buildings and grounds, the office management and office records, the reports presented by the executive officer to the Board of Education, the method of handling supplies and text-books, the professionally prepared courses of study and the excellent school manuals are some of the many elements of the administrative work which tend to place Hackensack among the best school systems. The co-operation of the Board of Education with the supervising principal, the intelligent attitude and keen interest of the Board of Education in the school program and the training and experience of the supervising principal are the significant elements which have brought about the desirable conditions found in Hackensack by the Survey Commission.

The very detailed studies made by the Survey Commission have covered fields in which the supervising principal and the other principals and teachers have been doing very extensive work. None of the real problems in modern education have been left untouched by the present school staff. Wherever the Survey Commission turned for information and the necessary statistics the facts were available in large measure, due to the careful analyses of school problems which have been made under the direction of the present administration. The reports in special fields which are incorporated in this survey and which cover the

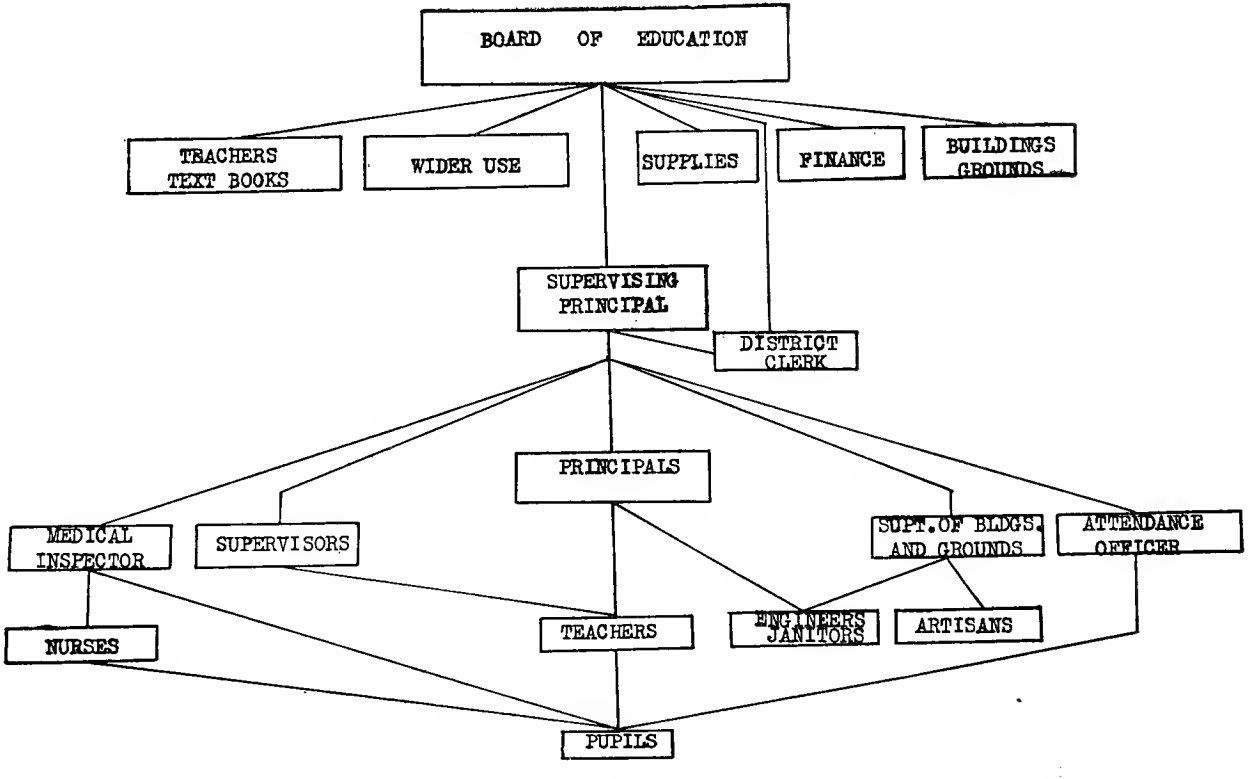
most important phases of the school problem bear out these conclusions of the Survey Commission. The conclusions drawn are in high degree complimentary to the local school system. Suggestions have been made for improvement at various points, but these suggestions concern details of problems rather than entire problems themselves. The Survey Commission has welcomed the opportunity of making a study in a school system where there has been so much to commend and so little to condemn.

In Chart No. 1 will be found the organization of the Hackensack public schools as it exists to-day. The Board of Education operates through the agency of five standing committees which are assigned specific problems. The work of these standing committees has been satisfactory to a large degree in the past. If, however, the functions performed by these committees were analyzed in detail, the same conclusion would no doubt be reached which has resulted from similar studies, namely that these committees were in certain measure duplicating the work of the administrative officers or of the Board of Education meeting as a whole. It is reasonable to expect that in a school system of the size of Hackensack the Board of Education could function properly with the reduction of its standing committees to either two or three. It may be desirable to retain such committees as the Committee on Teachers, the Committee on Buildings and Grounds and the Committee on Finance. This is a detail in organization which is, after all, of slight importance in a school system which is doing its work as well as it is being done in Hackensack. The other relationships established on this chart are those which are sanctioned by the most thorough students of educational administration to-day. A somewhat similar chart has been included in the Manual of September, 1920. It is of extreme value to place a chart of this kind where teachers can constantly be kept in touch with the relationships that the Board of Education sanctions between itself and its officers.

The good results accomplished in Hackensack are in no slight measure due to the fact that the Board of Education has recognized the supervising principal as its chief executive officer and is holding him responsible for the administration and supervision

of the school system. In other words, Chart No. 1 does not represent a mere situation that is to be desired, but represents the working relationships that have been established in Hackensack.

CHART No. 1
ORGANIZATION OF HACKENSACK PUBLIC SCHOOLS



As indicated in the section on the teaching staff, the Survey Commission feels that an exceptionally strong staff of teachers has been assembled in all of the different schools in Hackensack. The member of the staff who congratulated herself on "teaching in a modern school system" appreciated fully the inspiration and pleasure which come from working with a group of teachers who are professionally-minded and who are constantly endeavoring to improve their social status. The "Teachers' Manual" of September, 1920, indicates the attitude of the administration toward the professional advancement of teachers while in service. The following paragraph is an excerpt from this manual:

> "All teachers are expected to take advantage of opportunities for professional growth. Reading of books and articles on educational subjects, attending educational meetings, participating in the activities of professional associations, visiting other schools, taking educational courses, studying school problems, taking part in community enterprises, and gaining information about places, people and institutions outside the immediate school environment, are all recognized as contributing to the efficiency of a teacher. Voluntary work of this sort is likely to be of more value than that which is done merely because it is required. The minimum requirements stated in connection with the salary schedule are intended to stimulate the efforts of such teachers as may find it difficult to direct their professional growth."

The report on the teaching staff indicates that most of the elements mentioned in this paragraph have become instrumental in the further professional development of teachers. The teachers themselves show a keen desire to accept the opportunities which the Board of Education thus makes available for them and demonstrate by their classroom work and the kind of tasks in which they engage that there is little stagnation within the school system. Teachers are put in contact with the latest professional progress, are trained to analyze their own problems in terms of the more modern developments, are constantly weighing values and selecting those which are most worthy of incorporation in the Hackensack system. It is to be hoped that the program in Hackensack will always permit of this definite professional ad-

vancement while in service, the value of which can never be reckoned in dollars and cents.

In the light of these opportunities which prevail in the local school system, it is unfortunate that there is such a large turnover in the staff because of the demands made upon the local school system by school systems which offer greater inducements. At the opening of the school year—1920—forty new members were added to the staff. This is a large turnover for a school system which invests as much as Hackensack does in the training of its teachers. The following paragraph taken from the March, 1921, report of the supervising principal embodies the attitude of the Survey Commission toward this particular problem:

> "More than half of the members of the staff have joined us within about two years. This rapid change in the personnel of the teaching corps introduces a very difficult problem. The development of ideals, of mutual understanding needed for effective co-operation and mastery of the course of study best adapted to our schools is a matter of slow growth. When a teacher leaves who has grown into the system, who has had the benefit of the advice and direction of administrative officers, and has shared in the conferences on the aims and methods which the system has been gradually building up, he carries with him a part of the life blood of the institution. It takes time to repair the loss. If the changes come very frequently, it is almost impossible to avoid loss of power which has cost years of effort. It is of the highest importance, therefore, that we do everything possible to retain the teachers who have shown themselves to be valuable members of our corps. To do this we shall have to keep our standard of salaries at a level as high as that of other progressive communities."

BUILDINGS AND GROUNDS

The supervision of buildings and grounds has been of such a nature as to maintain these plants in a very satisfactory state of repair. Apparently the minutest detail has been given and is being constantly given consideration. The buildings are exceedingly clean, the walls are well decorated, the grounds are taste-

fully adorned and kept free from papers, refuse and other objectionable materials; the equipment shows the best of care; the service systems are well maintained; and those rooms which are most difficult to keep in good condition, namely the lavatories, were found to be uniformly satisfactory. The rules and regulations prepared for the caretakers of the school buildings are definite and complete. Apparently Hackensack has succeeded in accomplishing what few other school systems have done, namely, selecting a satisfactory care-taking personnel and maintaining their services at a high degree of efficiency. Such a detail as the daily reporting by the janitorial staff concerning the condition of the doors at the fire exits and of the fire exits themselves, has not been considered too burdensome in order to assure that every measure has been taken to provide for the safety of school children. This is a measure which may well be imitated by other school systems where this problem has received a minimum of attention.

OFFICE MANAGEMENT

The office of the Board of Education and the supervising principal may be considered a modern business office. It is the type of office which is recognized as necessary where modern businesses expect to develop a high degree of efficiency. The Survey Commission found available in this office the data which were necessary in order to thoroughly analyze the functioning of the school system. It was evident that a continuing survey was being conducted by the supervising principal and his staff so as to keep them in touch with the needs of the school system itself. The Board of Education can feel assured that the money that has been spent in office files and office devices is being utilized to a very constructive end in the local school system.

RECORDS AND REPORTS

The administrative officers in Hackensack have fully recognized the importance of an adequate system of records and reports. Every teacher is brought in close contact with this system

when she first becomes a member of the staff, through the agency of the "Teachers' Manual." The essential data for pupil records and a very satisfactory organization of the reporting system between teachers and officers of the school system are commendable features. That the records which are maintained in the school system with considerable cost in time and in energy are effectively used is very clear from the annual reports which have been submitted by the supervising principal to the Board of Education and the public of Hackensack.

ANNUAL AND MONTHLY REPORTS

Printed reports of the activities of the school system during the incumbency of the present chief executive show how wisely the recording and reporting system has been utilized for the purpose of building a consecutive educational program. These reports include essential data on classification, promotion and progress of school children with recommendations which apparently are only made on the basis of data carefully collected and with discussions of the work that has been attempted in the schools and the results that have been achieved. The reader who desires to familiarize himself with the progress that has been made in the Hackensack schools will profit by reading the annual reports in the order in which they have been issued. The consecutive nature of the program and the degree to which the recommendations that have been made coincide with the recommendations of the Survey Commission soon become apparent.

The change which has been made from the annual report to a report which is issued monthly or at periods during the year is one that is in keeping with the changes which are taking place in school publicity throughout the United States. Because of the progress that is being made in educational methods and because of the insistently greater demand that is being made upon the school system by the fathers and mothers of the boys and girls, it becomes most desirable to keep the patrons and citizens in close touch with the schools through the channel of a "house-organ" or school publication issued frequently during the year by the Board of Education. It is interesting to note that in this field Hackensack is keeping in touch with the progress elsewhere.

SCHOOL MANUALS

The school manual issued each year presents in detail the facts which are needed by the school teacher, who must rapidly familiarize herself or himself with the school organization and with the details of administration. This pamphlet is of a loose-leaf nature and is added to from time to time as bulletins are issued from the central office. It is a type of pamphlet which may well be duplicated in other communities. The concise nature of the document and the thoroughness with which all important elements are covered are further indications of the recognition on the part of the administrative officers that certain elements of administration must be mechanized in order that the time of teachers and pupils is not wasted.

THE SCHOOL BUDGET AND SCHOOL ACCOUNTING

The budget estimates conform to the State practice in accounting. The system of budgeting and the accounting system have recently been studied in detail by special auditing agents of the Board of Education. It is unfortunate that the budgeting system and the accounting system do not conform to the system which has been widely accepted in many cities. If this were done, the report to the National Bureau of Education could be more readily made and comparisons with expenditures in cities outside of the State would be more readily possible. It would be advantageous for Hackensack if in the light of the following standards the future distribution of expenditures were made. These standards are:

1. LEGALITY
   The reports of expenditures should conform to national, state and city requirements.

2. UNIFORMITY
   A sufficiently large number of schools must use the same system of distribution so that unit costs can be compared for various objects, services, balances and time periods.

3. FLEXIBILITY
   The system must be flexible enough to be usable in various size schools and of various degrees of complexity.

4. SIMPLICITY
   The labor and expense of distribution must not be so great as to encounter the law of diminishing returns. There should be no overlapping or duplication of items on any one report.

5. ADEQUACY
   The system should agree with the four divisions of accountancy:
   (a) Function—The kind of work helped along by the payment.
   (b) The object of the expenditure or the actual thing bought or service obtained.
   (c) Character—The financial character of the payment of a fiscal transaction.
   (d) Location—The location benefited by the transaction to which the expenditure is chargeable.

The distribution must be sufficiently detailed so that intelligent judgment on each type of expenditure may be made.

With conformity to the national system of distribution of expenditures and with the installation of a cost accounting system which will permit of the most accurate budget making, Hackensack will have the desirable scheme of accounting toward which all school boards should tend.

STATISTICAL STUDIES

Many statistical studies have been made by the administrative officers and have been utilized for administrative purposes purely. Apparently the school officers in Hackensack do not hesitate to spend the time and energy necessary in order to ascertain the facts before recommendations are made. These statistical studies are on file in the supervising principal's office and cover a wide range of problems. Parts of these studies have been included in the annual reports, but many more have been made and used as indicated above. Here again is evidence of a painstaking thoroughness on the part of the administration which is worthy of great commendation.

SUPPLIES AND TEXT-BOOKS

The creation of a budget system for supplies and the determination of the definite appropriations which are available for each

school and each grade are most commendable elements in the handling of the supply problem. The system of requisitions is a most satisfactory one since it involves the necessary checks when goods are received and the necessary checking against the appropriations. The details of management of both the supply and text-book problem have been thoroughly mastered by the supply officers and apparently every economy is being exercised in order to properly safeguard the community's expenditures and yet at the same time to provide reasonably for the needs of all school children. Niggardly expenditures in this field and over-attention to the distribution and use of supplies cannot be considered criticisms of the local management.

ATTENDANCE AND HEALTH

Hackensack is making every attempt to establish a high-grade attendance record and to safeguard the health of the school children through a proper attendance and health program. The regulations concerning health and attendance, as they are to be found in the School Manual, are complete and thorough-going.

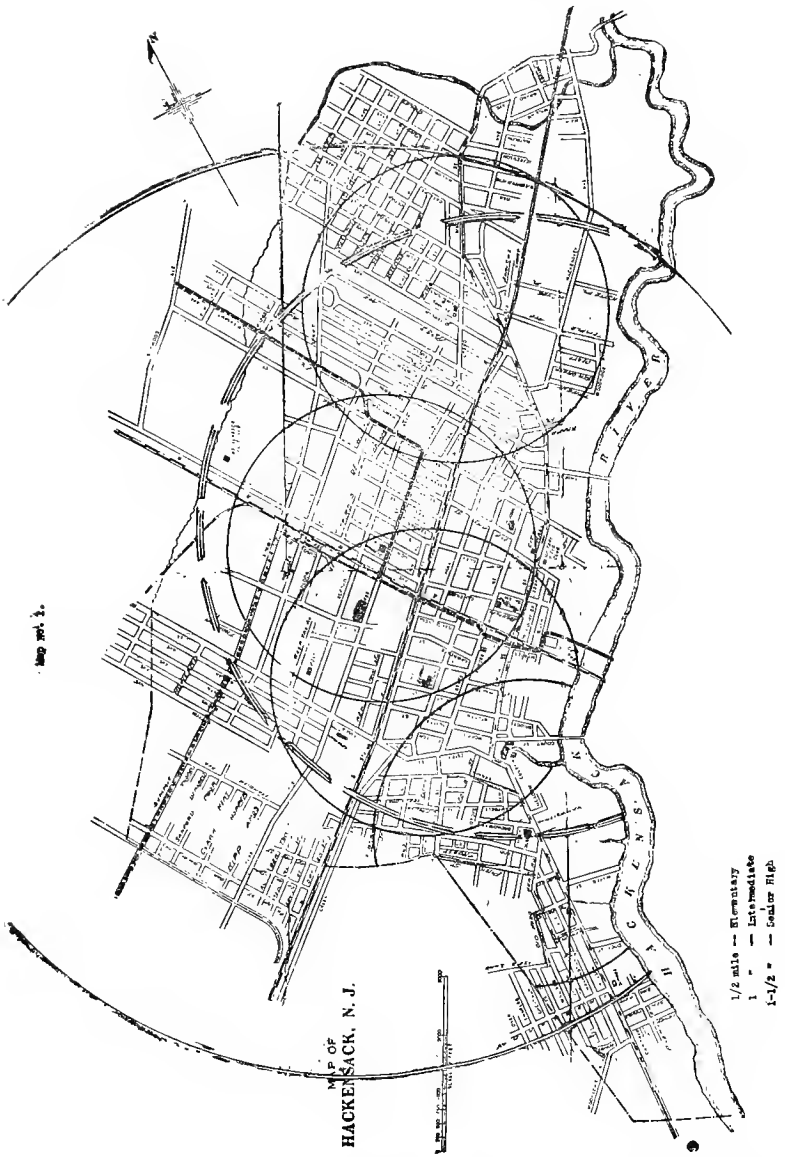
As is indicated elsewhere in this report, the relationship between enrollment and attendance is not considered as satisfactory as could be found in a residential city like Hackensack. This is a problem which needs the further attention of the Attendance Department. The health program which has already included the establishment of open-air schools for anæmic children, and which provides for careful medical inspection, has reached a point in progress in advance of that of many school systems. Here, again, were found many evidences that the minutest details of the medical program are being given every consideration. The Survey Commission is confident that the program in these two fields will keep pace with the State requirements and with the progress which educational science makes in these two branches of school administration.

THE SCHOOL BUILDING PROGRAM

Map No. 1 shows Hackensack with the location of its schools. Circles have been drawn showing the area about each school. Circles have been drawn with the elementary schools as centers

and with a one-half-mile radius. For the intermediate school a one-mile radius has been used. For the senior high school a one-and-a-half-mile radius has been used. These distances conform to the distances which are commonly accepted for these types of schools in communities of this size.

The intermediate school and the senior high school are well located with respect to the present and future residential sections of the city. The overlapping between the districts of the elementary schools is marked to a great degree, especially where the territory of School No. 2 overlaps the territory of School No. 1 and School No. 5.



Hackensack should bear in mind that its elementary school buildings are, in large measure, too small to carry out the high degree of specialization in the classification of children which has become desirable in this school system. The proper classi-

fication of children for the purpose of recognizing individual differences can only be brought about where elementary school buildings of 20, 24 and 28 rooms are found. The study of the school buildings indicates that School No. 2 is the least satisfactory among the school plants, one which should be supplanted as the school building program advances. When this becomes possible, a redistricting of the city for elementary school children should form the first part of the program with the location of an elementary school where there will be a minimum of overlapping.

The community is to be commended upon the location of its intermediate school and of its senior high school. The high school report indicates that speedy action should be taken by the community in extending the facilities that are provided in this plant. Since the World War there has developed throughout the United States an unprecedented demand for high school training and high school education. High schools are being overcrowded with students as never before in the history of our public school system, and hence school buildings are being taxed to their utmost capacity and in many cases far beyond. This increasingly greater insistence upon a high school training by the youth of America can in no sense be considered temporary. Without doubt, it is merely an indication of the continued demand that will be made upon American communities for a maximum of education on the part of all boys and girls over the years to come. This demand will continue to be as insistent in Hackensack. The citizens and the Board of Education must recognize the need as one which is here to stay. The school building program must be advanced by adding, in the very near future, to this modern high school plant. In general, the Board of Education should bear in mind that, in a growing city like Hackensack, building needs of ten to fifteen years from now must receive full consideration to-day. Careful analyses of trends of population, of possible residential growth and of trends in residential types should be constantly part of the work of the administration. No duty of the Board of Education is more important than to provide the plant which is adequate for the development of the educational program which the officers and teachers are engaged in promoting.

The School Buildings

OF

Hackensack, New Jersey

CONTENTS

	PAGE.
Scoring the School Buildings,	27
Sites,	32
External and Internal Building Structure,	36
Service Systems,	39
Fire Protection,	42
The Cleaning of School Buildings,	44
Artificial Lighting,	44
Water Supply System,	45
Washing and Bathing,	46
Toilet Facilities,	47
Electric Service Systems,	48
The Classrooms and Recitation Rooms,	49
The Natural Illumination of Classrooms,	53
Seating of Classrooms,	57
The Artificial Lighting of Classrooms,	58
Cloakrooms in Classrooms,	59
Color Scheme of Classrooms,	61
Special Rooms,	61
Playrooms,	64
School Auditoriums,	65
Libraries,	66
Lunch Rooms,	67
Officers' Rooms,	67
Teachers' Rooms,	68
Janitors' and Supply Rooms,	68
Laboratories,	69

TABLES.

TABLE.	PAGE.
I. Scores Allotted to Two School Buildings by Judges,	30
II. Detailed Scores Allotted by Judges on the School Buildings of Hackensack, New Jersey, May, 1921,	31
III. Comparison of Hackensack Building Scores with Building Scores of Other Cities,	32
IV. Playground Area Provided in Elementary Schools Distributed by Buildings—Hackensack, N. J.,	33
V. Areas of School Sites and of the Portions Thereof Used for Various Purposes—Hackensack, N. J.,	34
VI. Percentages of Total Enrolment with Varying Playground Provisions in Eight American Cities,	34
VII. Playground Area Provided in Elementary Schools of Thirty-one Cities,	35

TABLE. PAGE.

VIII. Percentages of Total Enrolment Housed in Buildings Erected at Various Dates in Twelve New Jersey Cities, June, 1921, 36

IX. The Size of School Buildings in Hackensack as Compared with the Size of School Buildings in Thirty Other Eastern Communities, ... 38–39

X. A Comparative Study of the School Buildings of Hackensack and Four Other Cities, Scoring 0%–25%, 26%–50%, 51%–75%, 76%–100% of the Perfect Score on Each of the Six Items of the Service Systems Listed, ... 40

XI. Comparative Study of Drinking Facilities of the Schools of Paterson, Omaha, St. Paul, Amsterdam and Hackensack, 46

XII. Facilities for Washing Provided for Children in the Elementary Schools of Hackensack, ... 47

XIII. Toilet Systems and Baths, ... 48

XIV. School Buildings of Hackensack, N. J., Arranged in Order of Total Scores Alloted on Item IV—Classrooms, ... 49

XV. Data Concerning Room Dimensions of the Elementary Schools and High School of Hackensack, N. J., ... 51

XVI. Hackensack Elementary Schools Compared with Four Other School Systems on the Standardization of the Number of Cubic Feet per Pupil. 51

XVII. Hackensack's Conformity to Standardization of the Classroom Area per Pupil as Compared with that of Five Other Cities, 52

XVIII. Ratio of Window Area to Floor Area in Hackensack and Seven Other Cities, ... 54

XIX. Number of Blackboards of Various Heights from the Floor in the Different Grades of the Hackensack City Schools, 56

XX. Heights of Blackboards in Hackensack City Schools—Elementary Schools, ... 57

XXI. The Heights of Blackboards in Six Cities, ... 57

XXII. The Percentages of Adjustable and Non-Adjustable Seats in the Elementary Classrooms of Five Cities, ... 58

XXIII. Standard Provisions for Classrooms, Special Rooms and Service Rooms in an Elementary School—Baltimore, Md., 62

XXIV. Classroom and Special Room Provisions in the Junior High Schools of Three Cities—1921, ... 63–64

CHARTS.

1. Score Card for City Buildings, ... 28–29
2. Detailed Scores on Hackensack School Buildings, ... 32
3. Standard Elementary School Room, ... 60

The School Buildings of Hackensack

When large groups of children are brought together in a public school system, the first consideration should be for their safety, comfort and health. Teachers and pupils will always work better when the annoyances, due to poor building planning, have been reduced to a minimum. Patrons and parents are constantly measuring the school plant in terms of standards which they themselves set up. The Survey Committee has measured the school plants of Hackensack in the light of the most acceptable modern school building standards. Every phase of school building construction and equipment which affects the educational welfare of the child, or the success of the teacher, has been considered in connection with this rating. The Strayer, Engelhardt Score Card for City School Buildings has been used as a basis for the rating.* This score card is shown in Chart 1.

It will be seen that a perfect school building may be rated at 1,000 points according to this score card, and that the many subdivisions of a school building are each scored separately and then combined in order to secure the total score. This score card has been utilized in the analysis of the school buildings of many city school systems.

It has been the experience of those utilizing this score card that a building which scores between 900 and 1,000 points approaches perfection in all details or perfection in all but a few details. Buildings have frequently been scored above 900 points. A score of from 700 to 900 points is indicative of a fairly satisfactory building, one in which the demands of modern school practice can be reasonably well carried out. Buildings scoring less than 600 points, and more than 500 points, may be rated as only fair and require considerable alteration before they can be considered as meeting all of the standards for modern school construction.

*A Score Card for City School Buildings—by G. D. Strayer and N. L. Engelhardt, published by the Bureau of Publications, Teachers College, Columbia University, N. Y. C.

CHART 1

SCORE CARD FOR CITY SCHOOL BUILDINGS

Score of Building

	1	2	3
I—Site			125
A Location		65	
1 Accessibility	25		
2 Environment	30		
B Drainage		30	
1 Elevation	20		
2 Nature of soil	10		
C Size and Form	40	40	
II—Building			165
A Placement		55	
1 Orientation	15		
2 Position on site	10		
B Gross Structure		80	
1 Type	5		
2 Material	10		
3 Height	5		
4 Roof	5		
5 Foundations	5		
6. Walls	5		
7 Entrances	10		
8. Aesthetic balance	5		
9 Condition	10		
C. Internal Structure		80	
1. Stairways	35		
2 Corridors	20		
3 Basement	15		
4 Color scheme	5		
5. Attic	5		
III—Service Systems			280
A. Heating and Ventilation		70	
1 Kind	10		
2 Installation	10		
3. Air supply	15		
4 Fans and motors	10		
5 Distribution	10		
6 Temperature control	10		
7 Special provisions	5		
B Fire Protection System		65	
1 Apparatus	10		
2 Fireproofness	15		
3 Escapes	20		
4 Electric wiring	5		
5 Fire doors and partitions	10		
6 Exit lights and signs	5		
C Cleaning System		20	
1 Kind	5		
2 Installation	5		
3 Efficiency	10		
D. Artificial Lighting System		20	
1 Gas and electricity	5		
2 Outlets and adjustment	5		
3 Illumination	5		
4 Method and fixtures	5		
E Electric Service System		15	
1 Clock	5		
2 Bell	5		
3 Telephone	5		

	1	2	3
F. Water Supply System		30	
1. Drinking	10		
2. Washing	10		
3. Bathing	5		
4. Hot and cold	5		
G. Toilet System		50	
1 Distribution	10		
2. Fixtures	10		
3 Adequacy and arrangement	10		
4 Seclusion	5		
5 Sanitation	15		
H. Mechanical Service System		10	
1. Elevator	5		
2. Book-lifts	2		
3. Waste-chutes	3		
IV—Class Rooms			230
A. Location and Connection	35	35	
B. Construction and Finish		95	
1. Size	35		
2. Shape	15		
3. Floors	10		
4. Walls	10		
5. Doors	5		
6. Closets	5		
7. Blackboards	10		
8. Bulletin board	5		
9. Color scheme	10		
C. Illumination		30	
1. Glass area	45		
2. Windows	30		
3. Shades	10		
D. Cloakrooms and Wardrobes	25	25	
E. Equipment		50	
1. Seats and desks	35		
2. Teacher's desk	10		
3. Other equipment	5		
V—Special Rooms			160
A Large Rooms for General Use		65	
1. Playroom	10		
2 Auditorium	35		
3. Study hall	5		
4. Library	10		
5. Gymnasium	10		
6. Swimming pool	5		
7. Lunch room	10		
B Rooms for School Officials		60	
1. Officers	10		
2. Teachers' room	30		
3 Nurses' room	10		
4. Janitor's room	5		
C. Other Special Service Rooms		60	
1 Laboratories	20		
2. Lecture rooms	10		
3. Store rooms	5		
4. Studios	5		
Totals	1000	1060	1060

INSTRUCTIONS FOR USING CARD—(1) Basis for Scoring, 1,000 points. (2) For scoring three columns are allowed. While actually at work on a building only the first need be filled out, the second and third to be filled out at leisure. (3) Where credit is allowed for any single item not present and not needed in a building draw a circle around such credit.

In the judgment of those who have used the score card extensively and who are well acquainted with present-day standards for school accommodations, a building which scores less than 500 points is one which is not worthy of a place in a modern school system. As a rule, it is not economical to repair such a building, and the wise plan to be followed is to consider it for

abandonment at the earliest moment in the school building program.

SCORE CARD—(*Continued*)

Page

TABLE . . . † DETAILS OF THE CLASSROOMS OF . . . . . SCHOOL Date . . .

		Standards
1. Room No.		
2. Grade		
3. Pupil capacity		
4. Pupil enrollment		
5. Dimensions Length, ft.		32 ft
6. Width, ft.		24 ft
7. Height, ft		12 ft
8. Floor area, sq. ft		
9. Area per child of pupil capacity		15 sq ft
10. Area per child of enrollment		15 sq ft
11. Area per child, with 40 in class		15 sq ft
12. Total cubical contents, cu. ft		
13. Cu. ft. per child of pupil capacity		200 cu ft
14. Cu. ft. per child of enrollment		200 cu. ft
15. Cu. ft. per child, with 40 in class		200 cu ft
16. No. of windows on front		None
17. left		All
18. rear		None
19. right		None
20. No. of windows size x		
21. x		
22. x		
23. x		
24. Window glass area—sq. ft.		
25. Ratio of window area to floor area.		20%
26. Width of mullions—inches		12 in or less
27. Distance—first window to front wall		7 ft
28. Height of windows from floor		3½ to 4 ft.
29. Height of windows from desk tops		
30. Distance—window top to ceiling		6 in. or less
31. Finish of walls		Smooth
32. Color of walls		Light green
33. Type of blackboards		Light gray Slate
34. Height of blackboards from floor		*
35. Window shades—Type		Double
36. Color		Light sage
37. Book closet		

NOTES: Item 9=Item 8 divided by Item 3. Item 10=Item 8 divided by Item 4. Item 11=Item 8 divided by 40. Item 13=Item 12 divided by Item 3. Item 14=Item 12 divided by Item 4. Item 25=Item 24 divided by Item 8. Some standards given in last columns. *Others consult St. Paul School Survey, Part I, by Strayer and Engelhardt. †One copy to be retained by the Principal, one copy to be filed in Superintendent's office.

In securing the final score for a school building the judgments of three judges were utilized. These judgments were combined, as shown in Table I. In this table Scorer No. 6 rated the Fairmount School at 666; Scorer No. 2 at 694 and Scorer No. 1 at 684. The combination of their judgments gives a final score of 685 for the school building. The scores for other school buildings were secured in a similar manner. (The standards utilized in scoring and the method employed are included in the Bulletin of Standards for City School Buildings, by G. D. Strayer and N. L. Engelhardt, published by the Bureau of Publications, Teachers College, Columbia University, N. Y. C.)

TABLE I

SCORES ALLOTTED TO TWO SCHOOL BUILDINGS BY JUDGES

	SCHOOL NO. 4—FAIRMOUNT					HACKENSACK HIGH SCHOOL					
	Scorer's No.					Scorer's No.					
	6	2	1	Median		6	2	5	1	3	Median
Item I, ...	*89*	*85*	*88*	..	*87*	*100*	*106*	*102*	*88*	*85*	.. *105*
A, ...	45	50	48	48	...	44	48	37	54	47	47 ...
B, ...	24	20	25	24	...	18	22	30	24	23	23 ...
C, ...	20	15	15	15	...	38	36	35	10	15	35 ...
Item II, ...	*121*	*128*	*126*	..	*128*	*133*	*124*	*134*	*138*	*140*	.. *136*
A, ...	22	20	22	22	...	21	18	22	24	21	21 ...
B, ...	38	39	36	38	...	47	50	56	46	51	50 ...
C, ...	61	69	68	68	...	65	56	56	68	68	65 ...
Item III, ..	*170*	*178*	*185*	..	*173*	*199*	*202*	*197*	*204*	*208*	.. *201*
A, ...	35	40	42	40	...	48	49	46	49	54	49 ...
B, ...	43	42	42	42	...	44	51	40	44	43	44 ...
C, ...	10	10	16	10	...	17	15	10	13	12	13 ...
D, ...	12	12	18	12	...	13	14	12	17	17	14 ...
E, ...	10	10	14	10	...	13	15	15	14	15	15 ...
F, ...	17	16	16	16	...	20	18	24	18	22	20 ...
G, ...	38	43	30	38	...	37	35	47	41	42	41 ...
H, ...	5	5	7	5	...	7	5	3	8	3	5 ...
Item IV, ..	*209*	*215*	*200*	..	*215*	*238*	*246*	*225*	*223*	*238*	.. *236*
A, ...	30	30	25	30	...	30	30	30	30	28	30 ...
B, ...	60	69	74	69	...	76	77	70	69	72	72 ...
C, ...	68	67	50	67	...	73	76	63	73	73	73 ...
D, ...	20	15	15	15	...	20	22	18	15	22	20 ...
E, ...	31	34	36	34	...	39	41	44	36	43	41 ...
Item V, ...	*77*	*88*	*85*	..	*82*	*91*	*95*	*103*	*93*	*79*	.. *90*
A, ...	32	38	30	32	...	35	44	53	39	32	39 ...
B, ...	18	18	20	18	...	24	19	24	18	18	19 ...
C, ...	27	32	35	32	...	32	32	26	36	29	32 ...
Total, ...	666	694	684	..	685	761	773	761	746	750	.. 768

Final score for School No. 4 (Fairmount), ... 685
Final score for Hackensack High School, ... 768

In Table II are given the final scores for each one of the six school buildings of Hackensack. These scores show one school building, namely, No. 2, rating less than 500 points. one rating between 500 and 600 points, namely, No. 5, two rating between 600 and 700 points, and No. 3 and the High School rating above 750 points. The highest rating is given the No. 3 school, while the High School is a very close second.

When these ratings are compared with ratings made with other school systems in which the Strayer, Engelhardt Score Card has been used, it is seen that Hackensack's school plants rate, as a whole, higher than those of many other cities.

Table III shows that Hackensack has made a most commendable effort to bring these schoolhousing conditions to a high level. The individual elements in the scores which have been the biggest factors in raising or lowering scores will be discussed in the pages which follow.

TABLE II

DETAILED SCORES ALLOTTED BY JUDGES ON THE SCHOOL BUILDINGS OF HACKENSACK, NEW JERSEY, MAY, 1921

	Possible Maximum No. of Points	School No. 1, Broadway	School No. 2, Union	School No. 3, State	School No. 4, Fairmount	School No. 5, First St.	Hackensack High School
I. SITE,	*125*	*97*	*85*	*74*	*87*	*85*	*105*
A. Location,	55	50	48	45	48	47	47
B. Drainage,	30	27	27	24	24	23	23
C. Size and Form,	40	20	10	5	15	15	35
II. BUILDING,	*165*	*117*	*63*	*138*	*128*	*84*	*136*
A. Placement,	25	17	22	24	22	21	21
B. Gross Structure,	60	45	18	52	38	30	50
C. Internal Structure,	80	55	23	62	68	33	65
III. SERVICE SYSTEMS,	*280*	*170*	*84*	*238*	*173*	*137*	*201*
A. Heating and Ventilation,	70	34	9	67	40	39	49
B. Fire Protection,	65	46	18	45	42	31	44
C. Cleaning System,	20	10	7	19	10	10	13
D. Artificial Lighting,	20	11	8	18	12	7	14
E. Electric Service,	15	9	4	15	10	5	15
F. Water Supply,	30	20	10	22	16	7	20
G. Toilet Facilities,	50	35	28	47	38	31	41
H. Mechanical Service,	10	5	0	5	5	7	5
IV. CLASSROOMS,	*290*	*209*	*168*	*259*	*215*	*172*	*236*
A. Location and Connection,	35	25	10	33	30	15	30
B. Construction and Finish,	95	71	65	92	69	58	72
C. Illumination,	85	60	44	67	67	51	73
D. Cloakrooms and Wardrobes,	25	15	10	22	15	10	20
E. Equipment,	50	38	39	45	34	38	41
V. SPECIAL ROOMS,	*140*	*70*	*39*	*94*	*82*	*77*	*90*
A. Large Rooms for General Use,	65	27	13	40	32	35	39
B. Rooms for School Officials,	35	17	7	22	18	14	19
C. Other Special Service Rooms,	40	26	19	32	32	28	32
Total,	1000	663	439	803	685	555	768

TABLE III

COMPARISON OF HACKENSACK BUILDING SCORES WITH BUILDING SCORES OF OTHER CITIES.

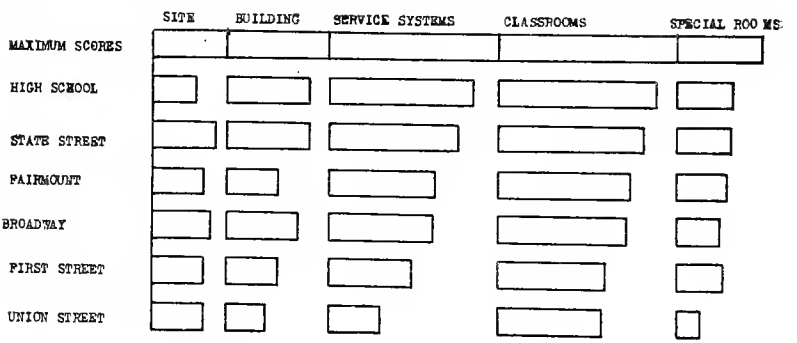
FINAL SCORES	ST. PAUL		OMAHA		PATERSON		HACKENSACK	
	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.
901-1000, ...	1	2	.....	.....	1	4	.....	.....
701-900, ...	3	6	9	18	6	24	2	33
601-700, ...	13	26	10	20	.....	.....	2	33
501-600, ...	23	46	17	34	6	24	1	17
Below 500, ...	9	18	16	32	12	48	1	17

Chart 2 represents graphically the scores allotted on each of the major items of the score card with comparisons with the total possible score.

CHART No. 2

DETALED SCORES ON HACKENSACK SCHOOL BUILDINGS

Comparison between the scores allotted on each of the five major items of the score card and the maximum possible scores for those items



SITES

(*Item I .....Strayer, Engelhardt Score Card.*)

One hundred square feet of space per child has been considered a standard for play purposes for elementary school children. For high school children a standard of ten acres for a community like Hackensack has been established.

In Table IV the playground areas per pupil are shown for

each of the elementary schools and compared with this 100 square feet standard. It will be seen that only one of Hackensack's school sites provides enough play space per pupil to meet this standard.

TABLE IV

PLAYGROUND AREA PROVIDED IN ELEMENTARY SCHOOLS, DISTRIBUTED BY BUILDINGS, HACKENSACK, N. J.

School	*Enrollment*	*Playground Area*	*Playground Area per Pupil*
No. 5, ...	231	27,000	116
No. 4, ...	370	18,750	50
No. 1, ...	1,148	31,440	27
No. 2, ...	513	11,088	21
No. 3, ...	776	6,912	8.9
Standard, ...			100

On the whole, the Hackensack school buildings are well located in districts free from objectionable features. The school grounds are well maintained and much effort has been expended in making the surroundings attractive with shrubs and well-kept grass.

From Table V it will be seen that a very large proportion of the school areas is covered by buildings or by open spaces devoted to lawns. The utilization of such a large share of the site for lawns and attractive landscape is most commendable. The criticism is that not too large a space is devoted to this purpose, but that the sites are not amply large for play purposes. As a school system grows it becomes more and more desirable that play space be provided for all schools. The failure to provide play space for School No. 3 is difficult to explain. It is recommended that the Board of Education utilize every opportunity for adding to school sites so that the desirable standard may be reached and even surpassed.

TABLE V

AREAS OF SCHOOL SITES AND OF THE PORTIONS THEREOF USED FOR VARIOUS PURPOSES, HACKENSACK, N. J.

SCHOOLS	AREA OF SITE		AREA COVERED BY BUILDINGS		PLAYGROUND AREA		OPEN SPACE (LAWNS, ETC.)	
	Sq. Ft.	%	Sq. Ft.	%	Sq. Ft.	%	Sq. Ft.	%
High School,*	182,400	100	25,080	14	54,720	30	102,600	56
No. 4, ...	86,040	100	10,873	13	18,750	22	56,417	65
No. 1, ...	72,000	100	20,970	29	31,440	44	19,590	27
No. 3, ...	56,682	100	27,875	49	6,912	12	34,787	38
No. 5, ...	47,000	100	7,062	15	27,000	57	12,938	28
No. 2, ...	31,320	100	12,000	38	11,088	35	8,232	27

* Site across street not included.

Table VI shows the inadequacy of the Hackensack playgrounds in another way and compares Hackensack with seven other cities in its playground facilities. It will be noted that Hackensack's playground situation is not superior in any sense. This is rather surprising, considering that Hackensack is distinctly a residential city.

TABLE VI

PERCENTAGES OF TOTAL ENROLLMENT WITH VARYING PLAYGROUND PROVISIONS IN EIGHT AMERICAN CITIES

PLAYGROUND PROVISIONS	St. Paul, 1917	Denver, 1916	Salt Lake City, 1915	Baltimore, 1920	Hackensack, 1921	Paterson, 1918	Passaic, 1919	Montclair, 1916
15 or less sq. ft., ...	.....	.....	.....	57	26	.....	.....	.....
15–30 " "	.....	.....	.....	28	53	.....	.....	.....
30 or less " "	29.1	.....	.....	85	79	78.8	63.6	.....
30–100 " "	56.1	.....	.....	10	13	21.2	31.3	.....
100 or less " "	85.2	82	35	59	92	100	94.9	6.3
100–200 " "	9.9	12.5	32	4	8	.....	4.4	6.5
200 or more, ...	4.9	5.5	31	1	.....	.....	.7	87.2

In Table VII will be seen the percentage of pupils in 31 cities having more than 60 square feet of playground area per pupil. These 31 cities are the cities of seven states of approximately

the same size as Hackensack, for which these data were available. It will be noted that Hackensack ranks twenty-third in the group in the facilities which are provided.

TABLE VII

PLAYGROUND AREA PROVIDED IN ELEMENTARY SCHOOLS OF 31 CITIES

NAME OF CITY	Percentage of pupils having more than 60 sq. ft. playground area per pupil.	RANK	No. sq. ft. per median pupil.	RANK
Ansonia, Conn.,	0	27	.....	.....
Asbury Park, N. J.,	0	27	11	28
Auburn, Me.,	70.8	8	65	13
Bloomfield, N. J.,	100	2	147	3
Bridgeton, N. J.,	74.6	7	95	10
Carlisle, Pa.,	91.3	4	134	4
Clinton, Mass.,	58.8	10	103	9
Concord, N. H.,	100	2	112	6
Dunkirk, N. Y.,	51.3	12	60	14
Englewood, N. J.,	49.8	14	50	16
Franklin, Pa.,	100	2	110	7
Gardner, Mass.,	75.8	6	91	11
Glen Falls, N. Y.,	21.5	20	27	22
Gloucester, Mass.,	30.6	18	36	20
Hackensack, N. J.,	*8.2*	*23*	*26*	*23*
Hornell, N. Y.,	61.3	9	109	8
Landaford, Pa.,	49.3	15	50	17
Lebanon, Pa.,	38.5	17	56	15
Little Falls, N. Y.,	0	27	41	19
Marlboro, Mass.,	0	27	21	25
Millville, N. J.,	50.6	13	86	12
Montclair, N. J.,	.....	.....	234	2
Olean, N. Y.,	15.2	21	20	26
Phoenixville, Pa.,	9.4	22	24	24
Plainfield, N. J.,	45.1	16	47	18
Rutherford, N. J.,	53	11	114	5
Saratoga Springs, N. Y.,	0	27	28	21
Shamokin, Pa.,	0	27	.....	.....
Sharon, Pa.,	0	27	17	27
Tyrone, Pa.,	27.6	19	10	29
Weymouth, Pa.,	83.3	5	380	1
Median,	41.6	.....	57.5	.....

Not only is the amount of play space per child very inadequate in Hackensack, but the apparatus which has been provided on playgrounds is very limited and far from sufficient. Much can be done in this field in order to give the Hackensack children the opportunities which are being offered in other communities.

EXTERNAL AND INTERNAL BUILDING STRUCTURE

(*Item II .....Strayer, Engelhardt Score Card.*)

One measure of the adequacy of school building structures is their recency of construction.

In Table VIII this adequacy is expressed in terms of the percentages of total enrollment housed in school buildings erected at various dates. Twelve New Jersey cities are included in this tabulation. To a certain degree the period of development of a community affects this tabulation. The children of Hackensack are, according to this tabulation, well housed as compared with the children of other cities. In other words, 87 per cent of the children of Hackensack go to school in school buildings which have been erected during the two decades 1900 to 1920. This means that these children are attending school in buildings which have been built during the period of greatest discussion of school building standards. It is evident from the scores that the school building construction in Hackensack does, in a large measure, conform to the standards set up during these decades.

TABLE VIII

PERCENTAGES OF TOTAL ENROLLMENT HOUSED IN BUILDINGS ERECTED AT VARIOUS DATES IN TWELVE NEW JERSEY CITIES, JUNE, 1921

	Hackensack	Plainfield	Montclair	Millville	Garfield	Englewood	Dover	Bridgeton	Burlington	Bloomfield	Rutherford	West New York
Before 1860, ...	1	..	..	..	..	..	..	16	..	..	..	..
1860–69, ...	..	2	1	..	..	..	2	..	..	..	..	..
1870–79, ...	9	10	..	11	14	..	25	..	..	20	..	..
1880–89, ...	..	20	1	7	..	..	..	19	..	12	15	..
1890–99, ...	3	7	16	15	17	5	28	37	54	..	..	..
1900–09, ...	32	17	35	36	26	39	32	28	23	47	46	29
1910–20, ...	55*	44	47	31	43	56	12	..	22	19	39	71

* Read: 55% of total enrollment in Hackensack are housed in buildings erected during the decade 1910-1920.

The school structures are, in each case, placed to the best advantage on their sites and are so orientated as to secure the optimum natural light for the greatest possible number of rooms. School No. 1 is an exception, as its northern front deprives many

of the rooms from all light except that from the north. The new buildings, No. 3 and the high school, have been planned so that all rooms are provided with the desirable natural lighting and so that there is an ease of circulation about the buildings which is commendable. Stairways, corridors, the location of toilet rooms and the location of special rooms indicate that very high-grade planning has been done in order to secure the results obtained. Hackensack is to be commended that it has used highly fire-resistive construction in these new buildings. It indicates that the program for the future will assure to Hackensack only the very best of modern school construction.

The older buildings, such as No. 1 and No. 2, have been remodelled to meet many of the objectionable elements in their original construction. There are some unsatisfactory features, however, about these old buildings even though they have been given this maximum of thought in their alteration. It is extremely unfortunate that the auditoriums have been retained on the third floor in School Buildings No. 1 and No. 4 and on the fourth floor in No. 2. This has made it very difficult to plan proper exits. The stairways leading from the top floor of a building should continue in one direct series to the exterior. This was found impossible in the No. 1 school. It leaves an undesirable situation which may cause trouble in case of fire. The lack of provision of smoke-proof stairwells, as in the case of School No. 3, is another example of a failure to provide the most adequately protected stairway passages. In general, however, as the scores will indicate, the proper safeguards about the entrances and corridors to the school buildings have been established. Panic bolts are installed and in most cases operate properly. Corridors are free from obstructions and are well maintained. The walls and foundations of the buildings have been given careful study, have been repaired where necessary, and are found to be in good condition. The basements of the buildings have been thoroughly cleaned, are maintained at a high standard and are free from unnecessary fire sources. In other words, there is evidence that the administration has considered the necessity for eliminating all sources of danger and for maintaining the buildings at a high standard as a very essential part of the development of the school system.

The elementary school buildings of Hackensack are larger than the elementary school buildings in other cities of similar size. This is again a most satisfactory situation. It is extremely pleasing to find that a city of the size of Hackensack has reduced to a great degree the problems involved in proper classification and grading by developing school centers. It is recommended that Hackensack continue to plan large elementary schools as its school building program develops. It is only through the establishment of these large school centers that individual children can be given the attention which has been found possible, to a marked degree, in the Hackensack schools.

Table IX shows the number of rooms in the median elementary school building of 31 cities which are approximately the size of Hackensack. It will be noted that Hackensack's median building is larger than the median building of any one of the other communities. This gives Hackensack an advantage which will not develop for a long period of years in these other communities which have continued to build small elementary school plants in place of the larger units. The best modern practice in a city like Hackensack calls for buildings having twenty rooms or more. This will permit of flexibility in grading and in frequency of promotion.

TABLE IX

THE SIZE OF SCHOOL BUILDINGS IN HACKENSACK AS COMPARED WITH THE SIZE OF SCHOOL BUILDINGS IN 30 OTHER EASTERN COMMUNITIES

CITY	*Number of Rooms in Median Elementary School Building*
Ansonia, Conn.,	8
Asbury Park, N. J.,	8
Auburn, Me.,	1
Bloomfield, N. J.,	14
Bridgeton, N. J.,	9
Carlisle, Pa.,	10
Clinton, Mass.,	4
Concord, N. H.,	3
Dunkirk, N. Y.,	9
Englewood, N. J.,	12
Franklin, Pa.,	6
Gardner, Mass.,	5
Glen Falls, N. Y.,	9
Gloucester, Mass.,	6
HACKENSACK, N. J.,	17
Hornell, N. Y.,	11
Landsford, Pa.,	8
Lebanon, Pa.,	6

CITY	*Number of Rooms in Median Elementary School Building*
Little Falls, N. Y.,	11
Marlboro, Mass.,	10
Millville, N. J.,	6
Montclair, N. J.,	13
Olean, N. Y.,	7
Phœnixville, Pa.,	14
Plainfield, N. J.,	9
Rutherford, N. J.,	8
Saratoga Springs, N. Y.,	13
Shamokin, Pa.,	13
Sharon, Pa.,	8
Tyrone, Pa.,	12
Weymouth, Mass.,	4
Median,	9

Data secured from the National Committee for Chamber of Commerce Co-operation with the Public Schools, Tribune Building, N. Y. C.

SERVICE SYSTEMS

(Item III .....Strayer, Engelhardt Score Card.)

The judges, in scoring the service systems of the school buildings, considered this item under the headings: "Heating and Ventilating," "Fire Protection," "Toilet Systems," "Cleaning Systems," "Artificial Lighting Systems," "Water Supply System" and "Electric Service Systems."

The adequacy of the service systems as compared with their adequacy as measured in four other school systems in the United States may be determined from Table X. In this table six of the service systems of the cities of Greensboro, N. C., Paterson, N. J., Passaic, N. J., Amsterdam, N. Y., and Hackensack, N. J., are studied with respect to the percentages of the total possible scores on each item which were allotted by the judges. Of all of these five cities Hackensack ranks foremost in the scores which have been allotted, indicating that in the opinion of the judges Hackensack has given greater consideration and greater care to these very important elements which have been measured. Hackensack has larger percentages of school buildings falling in the third and fourth groupings than has any other one city. This should prove to be very satisfactory to the Board of Education and the school officers who have been responsible for the high standards developed in these fields.

TABLE X

A COMPARATIVE STUDY OF THE SCHOOL BUILDINGS OF HACKENSACK AND FOUR OTHER CITIES, SCORING 0%–25%, 26%–50%, 51%–75%, 76%–100% OF THE PERFECT SCORE ON EACH OF THE SIX ITEMS OF THE SERVICE SYSTEMS LISTED

SERVICE SYSTEMS	Percentage of Buildings Scoring 0% to 25% of the Standard					Percentage of Buildings Scoring 26% to 50% of the Standard					Percentage of Buildings Scoring 51% to 75% of the Standard					Percentage of Buildings Scoring 76% to 100% of the Standard				
	Greensboro	Paterson	Passaic	Amsterdam	Hackensack	Greensboro	Paterson	Passaic	Amsterdam	Hackensack	Greensboro	Paterson	Passaic	Amsterdam	Hackensack	Greensboro	Paterson	Passaic	Amsterdam	Hackensack
Heating and Ventilation, ...	27.2	19.2	8.3	16.6	16.6	72.7	50.	25.	50.	16.6	0.	15.4	41.6	25.	50.	0.	15.4	41.6	25.	16.6
Fire Protection, ...	27.2	65.2	16.6	8.3	0.	36.3	15.4	33.3	75.	33.3	36.3	15.4	25.	16.6	66.6	0.	3.8	25.	0.	0.
Toilet Systems, ...	18.2	19.2	0.	0.	0.	36.3	42.6	50.	58.3	0.	45.4	15.4	33.3	16.6	50.	0.	19.2	16.6	25.	50.
Water Supply, ...	45.4	50.	42.6	50.	16.6	54.4	38.4	33.3	41.6	16.6	0.	38.	16.6	8.3	66.6	0.	7.7	8.3	0.	0.
Cleaning System, ...	18.2	3.8	25.	0.	0.	63.6	26.9	50.	66.6	66.6	18.2	50.	16.6	33.3	16.6	0.	19.2	8.3	0.	16.6
Artificial Lighting, ...	45.4	46.2	0.	0.	0.	54.5	23.1	66.6	66.6	33.3	0.	15.4	16.6	25.	50.	0.	15.4	16.6	8.3	16.6

The building survey was made during the late spring of 1921 and it was therefore impossible to measure the heating and ventilating plants when they were working under full load. The adequacy of these plants was measured on the basis of the kind of heating and ventilating systems installed. On this basis the No. 2 school scored 9 points; three buildings scored from 30 to 34 points and two buildings scored 54 and 67 scores respectively out of a possible 70. The very careful survey of the heating and ventilating systems made by heating engineers last year resulted in a series of recommendations which are now being carried out. In fact, most of the improvements recommended have already been completed. As soon as the recommendation for the replacement with boilers of the furnaces in School No. 2 is carried out, the score on this building will be much higher.

Authorities in this field now recognize that the split system of heating and ventilation is the most advantageous and economical for large school buildings. Under this system direct radiators are located within the rooms to be heated while the air is supplied by a mechanical system of ventilation. When the system is properly installed, each room may be supplied with fresh air warmed to the desirable temperature of 68 degrees Fahrenheit and having a humidity of 50 to 60 per cent, and free from dust and odors. The air intake must be well above the ground and be large enough to provide 2,000 cubic feet of fresh air for each pupil per hour. No system depending on gravity or the opening of windows can meet this demand. Heating systems should also be equipped with thermostatic controls which are kept in perfect working order and periodically checked by teachers and engineers to see that the temperature is regulated.

With the exception of School No. 2, in which the hot-air furnaces are being replaced by steam boilers, all of Hackensack's school plants are equipped with steam boilers, or steam boilers and hot-water boilers, as is the case in Schools Nos. 3 and 4 and the high school. Broadway School No. 1, State Street School No. 3 and the High School are equipped with the thermostatic system. All the systems were reported to furnish satisfactory heat except No. 2, and one room in the old High School No. 5

needs an extra radiator. The heating system at State Street School No. 3 is an especially well devised plant.

All schools, except Union Street School No. 2, are supplied with fresh air through mechanical systems. The State Street School No. 3 building is provided throughout with mechanical exhaust of foul air. The Broadway School No. 1 and the High School toilets are provided with mechanical exhaust of foul air. The boys' toilets in the Union Street School No. 2 need such an exhaust badly. In fact all toilet rooms should be equipped with mechanical exhaust of foul air. The window or gravity system cannot be depended upon to carry off the foul air from these rooms.

The unit system of ventilation installed in the High School has proven to be satisfactory in most particulars. It, however, has not proven to be satisfactory with respect to the auditorium, nor can it be expected that the unit system itself can ventilate this auditorium together with the balcony when filled with people, except by the installation of a maximum number of ventilating units. It is questionable whether this type of ventilating unit can ever be satisfactory in such a large room.

In general, a maximum of care has been expended in providing proper heat and ventilation for the school children of Hackensack. The facilities are being maintained intelligently and being given the kind of supervision which implies that Hackensack will secure adequate returns for the money it has invested in this field.

FIRE PROTECTION

The first consideration in the planning of a school building should be to guarantee ample opportunity for rapid exit of the children in case of danger. Second consideration should be given to the preservation of the building structure. These aims can be attained only by erecting structures of highly fire-resistive materials.

Hackensack's new high school plant may be designated as a fireproof structure of the modern type. Its furnace rooms are isolated by fire doors and its furnace is in a fireproof enclosure. It has adequate stairwells which allow rapid exit for the children. It is provided with automatic fire alarms and fire extin-

guishers and panic bolts on the doors. It has standpipes, but hose has not been provided on the ground that the building is so near the fire station. This hose should be provided so that the equipment may be complete with all known safeguards.

The only element that may be criticized at all in the planning of the high school building from the angle of fire protection is that the short side corridors on the third floor are blind corridors and do not lead directly to stairways. From the angle of protection against fire, School Building No. 3 is very satisfactory in many particulars. Its basement is isolated, the furnace is in a fireproof enclosure, it is equipped with an automatic fire alarm, fire extinguishers, hose on each floor and a fire escape. Its exits are plainly marked and red lights indicate the exits. The one protection that should have been added is the enclosure of the stairways as smoke-proof stairwells; for in case smoke should fill the classrooms and halls, there would be absolutely no certain method of escape without stairwells. If this enclosed stairwell provision had been made there would have been little necessity for the fire escapes to the rear. It also should be remarked here that in all future construction open outside fire escapes should be avoided, and, where fire stairwells are installed, every possible opportunity for providing an entrance on to these stairwells should be taken. This has not been done in the present instance.

Union School No. 2, the oldest building, is the least safe of any of the Hackensack schools. Part of it is a four-story structure and the children are all in the assembly room on the fourth floor several times each week. Should a fire occur in this school at such a time, a catastrophe might occur. The building is provided with well constructed exterior fire escapes. The approaches to these fire escapes are not satisfactory in every instance. No approach to a fire escape should be through a vestibule which can be cut off because of open doors. The basement of the building is not fireproof and it is not isolated. The school is provided with fire extinguishers, hose, automatic fire alarms and all doors are equipped with panic bolts.

In general, the Survey Committee has found that Hackensack has given more care and thought to the safety of its children than is given in any other city, the school buildings of which it has analyzed.

THE CLEANING OF SCHOOL BUILDINGS

Hackensack has only one school building, namely, No. 3, which is equipped with a vacuum cleaning system. This equipment permits of a thorough cleaning of floors, walls, desks and chalk rails. The new high school building has also the equipment, but the sanitary receptacle in the basement is still lacking. This should be added immediately, as the equipment cannot be utilized without this provision.

In rating this item on the score card the judges considered it under three elements, namely, the kind of system provided, and its installation and the efficiency of the system. Low scores were given the kind of system and installation, because of the reasons indicated above. It was very clear, however, to the judges that the school buildings were being maintained at a very high standard of cleanliness. The oiling of the floors, the use of sweeping compound, the janitorial standards which have been established and the constant supervision which is in evidence, make it clear that school housekeeping is receiving the consideration which is due it in the Hackensack schools. The very well devised manual for janitors and engineers is one which may well be duplicated in many other cities. It is clear that constant insistence upon the elements included in this manual has brought about the desirable condition with respect to cleanliness which is found in Hackensack.

ARTIFICIAL LIGHTING

All Hackensack school buildings are equipped in some degree with electric or electric and gas lighting fixtures. This element of school equipment has not received as much consideration as have many other elements in Hackensack. The adequacy of the artificial lighting equipment in the classrooms is discussed under "Classrooms." Electric lights are further needed in the toilet rooms and playrooms of School No. 4, and more adequate provision is particularly needed in School No. 2 and School No. 5. The standard lighting of a school building is as follows:

Standard Artificial Lighting System:

1. Gas and electricity:
   Gas for stairways, corridors, auditorium and fire exits.
   Electricity for the entire building.

2. Outlets and adjustment:
   Outlets—6-9 per class room; auditorium footlights, rear of stage, sides, ceiling; corridors 20-25 feet apart; at least one for each vestibule.
   Adjustment: Lights placed high enough not to shine in the eyes of occupants; switches near entries, auditorium, stage, and picture lantern booths; each cluster with an individual switch; darkening shades for rooms provided with picture lantern switch.
3. Standard illumination:
   For classrooms, study, and library rooms, 6 foot-candles at each desk without objectionable glare or shadows; for auditoriums, 3 foot-candles at each seat.
4. Method and fixtures:
   Method of illumination—semi-direct or indirect. Local lighting by lamps placed close to the work is unsatisfactory except for special cases, such as the lighting of blackboards, maps, charts, etc. Except in very rare instances, bare light sources should not be exposed to view. They should always be adequately shaded or completely hidden.
   Fixtures—simple, yet appropriate.

The Board of Education should establish standards for artificial lighting in the Hackensack schools and should secure an adherence to these standards in all future alterations and future construction.

WATER SUPPLY SYSTEM

Under this item are considered the drinking, washing and bathing facilities which are provided. On the basis of the number of drinking fountains installed, Hackensack has made a commendable effort to meet the standard of one fountain for every fifty children of school building capacity. The type of bubbler selected is also satisfactory in most particulars. It is gratifying to find that this school system has insisted upon the installation of a bubbler which is as sanitary as can be found to-day. In comparison with other cities, Hackensack is far better supplied than such places as Amsterdam, N. Y., Paterson, N. J., and St. Paul, Minn., with respect to its drinking fountain provision. In Table XI Hackensack's situation is superior to that of all communities except Omaha. The fountains in Hack-

ensack are also well located in corridors, where they are immediately accessible to children and where a maximum of utilization can be secured.

WASHING AND BATHING

Fifty per cent of the Hackensack school buildings are equipped so as to meet the standard requirements as to the number of washbowls per pupil, which is one bowl to 50-75 children. Broadway School No. 1, with one washbowl to each 143 children, is farthest from the standard in this respect. More washbowls should be installed in this building.

The new high school building is very adequately equipped with shower baths. State Street No. 3, and the old high school, No. 5, have no showers. They should be equipped with bathing facilities. Fairmount is adequately equipped with showers, but Broadway No. 1, and Union No. 2 need several more. The latter has but one bathing facility to each 500 pupils. All schools but the old high school are supplied with hot and cold water.

TABLE XI

COMPARATIVE STUDY OF DRINKING FACILITIES OF THE SCHOOLS OF PATERSON, OMAHA, ST. PAUL, AMSTERDAM AND HACKENSACK

NUMBER OF CHILDREN PER DRINKING FOUNTAIN	OMAHA, 1917		ST. PAUL, 1917		PATERSON, 1918		AMSTERDAM, 1920		HACKENSACK, 1921	
	Number of Buildings	Percentage of Buildings	Number of Buildings	Percentage of Buildings	Number of Buildings	Percentage of Buildings	Number of Buildings	Percentage of Buildings	Number of Buildings	Percentage of Buildings
No. fountains, ...	.....	.....	.....	.....	.....	.....	6	54.5	.....	.....
Less than 25, ...	3	6.4	.....	.....	.....	.....	.....	.....	.....	.....
25 to 49, ...	21	44.7	9	16.6	7	29.2	.....	.....	3	50.
50 to 74, ...	10	21.3	9	16.6	7	29.2	1	9.	.....	.....
75 to 99, ...	5	10.6	3	6.2	4	116.6	2	18.1	1	16.6
100 to 124, ...	2	4.2	5	9.2	1	4.2	1	9.	1	16.6
125 to 149, ...	.....	.....	1	1.8	1	4.2	.....	.....	.....	.....
150 or over, ...	6	12.8	15	27.7	4	16.6	1	9.	1	16.6
Percentage of buildings standard or above, ...	61.1		16.6		29.2		.....		50.	
Percentage of buildings below standard, ...	38.9		83.3		70.8		100.		50.	

Standard—one fountain for 50 children.

The attempt to secure provision for bathing in all of the schools is further evidence that a high grade program for physical welfare is being advanced. In not all instances are the bathing facilities high grade or entirely satisfactory, but the conditions in Hackensack are superior to the conditions to be found in the majority of cities.

TABLE XII

FACILITIES FOR WASHING PROVIDED FOR CHILDREN IN THE ELEMENTARY SCHOOLS OF HACKENSACK

Number of Children per Washbowl	*Hackensack Schools*
50 or less,	No. 3 and No. 4.
51-100,	No. 5, No. 2 and High School.
151-200,	No. 1.

Standard equipment calls for one washbowl to every 50-75 children.

TOILET FACILITIES

The standard equipment calls for one seat for each 25 boys and one urinal for each 15 boys. There should be one seat for each 15 girls. Hackensack schools meet these standards in some instances, nearly meet them in others, and only fall considerably below in the Broadway No. 1, and Union Street No. 2 schools, as shown by Table XIII. The distribution of toilets, seclusion, sanitation and type of fixtures are all to be recommended. The kindergarten rooms have well equipped toilet and wash rooms adjoining them.

In general, it is difficult to maintain school toilets at high standards of sanitation. Hackensack school authorities give evidence through the condition of the toilet rooms in this school system that they are aware of the full importance of maintaining toilet rooms which are highly sanitary. The splendid installations of the high school and School No. 3 are to be commended. This is the type of installation which should be made a part of every new school built in the future in this city.

Attention should be given to the needs of School No. 1 and School No. 2, in order to see that no inconvenience is being caused the children because the rooms are below standard in the adequacy of the equipment furnished.

TABLE XIII

TOILET SYSTEMS AND BATHS

Standard equipment calls for one seat for each 25 boys and one urinal for each 15 boys; one seat for each 15 girls.

Facilities in Hackensack Schools calculated on the basis of 1920 enrollment.

Schools	BOYS		GIRLS	
	No. Seats	No. Urinals	No. Seats	Showers
No. 1, ...	1 to 46	1 to 64	1 to 36	1 to 206
No. 2, ...	1 to 39	1 to 35	1 to 35	1 to 596
No. 3, ...	1 to 31	1 to 25	1 to 21	None
No. 4	1 to 22	1 to 22	1 to 18	1 to 64
No. 5, ...	1 to 21	1 to 24	1 to 14	None
High School, ...	1 to 41	1 to 36	1 to 27	1 to 57

Calculated on the basis of 1920 Maximum Membership

No. 1, ...	1 to 41	1 to 59	1 to 32	1 to 184
No. 2, ...	1 to 35	1 to 31	1 to 30	1 to 519
No. 3, ...	1 to 29	1 to 24	1 to 19	None
No. 4, ...	1 to 19	1 to 19	1 to 15	1 to 55
No. 5, ...	1 to 18	1 to 21	1 to 12	None
High School, ...	1 to 29	1 to 35	1 to 26	1 to 55

ELECTRIC SERVICE SYSTEMS

Another element which is considered under this item of Service Systems is the electrical service system, which is provided and which includes clocks, bells, gongs and telephones.

Though Hackensack school buildings, with the exception of the High School, are not equipped with electric clocks, yet every room that is used is equipped with a standard clock, and all buildings are equipped with an adequate system of gongs and bells for assembly, dismissal and fire control. In several buildings each room is connected with the principal's office by telephone.

The kind of equipment that is provided in this field and its adequacy leads to the conclusion that a minimum of time is wasted in school work in regulating dismissals, passing of classes, and the like. Taken as a whole, the equipment of Hackensack in this particular is effective and shows evidence of careful and economic planning.

THE CLASSROOMS AND RECITATION ROOMS

(Item IV .....Strayer, Engelhardt Score Card.)

In scoring the classrooms and recitation rooms of the Hackensack school buildings, the judges allotted the highest score to the classrooms of the State Street building and the lowest scores to the classrooms of School Building No. 2. With respect to their construction, location, illumination, equipment and the like, the classrooms of the high school were considered second to those of the State Street School.

Of the 1,000 points allotted the perfect building on the score card, 290 points have been devoted to classrooms. Comparison of each school with the total possible score for classrooms is given in Table XIV.

TABLE XIV

SCHOOL BUILDINGS OF HACKENSACK, NEW JERSEY, ARRANGED IN ORDER OF TOTAL SCORES ALLOTTED ON ITEM IV—CLASSROOMS

Showing distributed scores on the major subdivisions of this item as compared with the total possible score for each subdivision

ITEM IV—CLASSROOMS							
SCHOOLS SCORED	Rank on Basis of Total Score Allotted on Item IV	Maximum Possible Score and Allotted Scores	SUB-ITEMS Maximum Possible Score and Allotted Scores				
			A—Location and Connection	B—Construction and Finish	C—Illumination	D—Cloakrooms and Wardrobes	E—Equipment
Broadway—1, ...	3	209	25	71	60	15	38
Union—2, ...	5	168	10	65	44	10	39
State—3, ...	1	259	33	92	67	22	45
Fairmount—4, ...	2	215	30	69	67	15	34
First St.—5, ...	4	172	15	58	51	10	38
High School, ...	.....	236	30	72	73	20	41
Maximum possible score,	.....	290	35	95	85	25	50

In general, it should be stated that the Hackensack classrooms rank high as compared with classrooms of other school systems. There is every evidence that proper attention is being paid to the decorations of the classrooms, to their cleanliness and to the

creation of a desirable atmosphere through the agency of pictures and other decorations. The school authorities in Hackensack are to be congratulated upon realizing the importance of maintaining classrooms at a very high standard and of equipping them in such a way as to prove to be attractive to children.

The comfort of both children and teachers depends very largely upon the amount of floor space and air space provided them. In Table XV are shown the data concerning room dimensions for all of the schools in Hackensack. It will be seen that the median situation for Hackensack is above that of the State requirement in every instance, except when area and the cubical contents of classrooms for the high school are measured in terms of 40 pupils per room. It is not to be expected that with this large number as a factor the high school rooms would meet the standard in every case as set up by the State law. Fifty per cent of the elementary classrooms and 44 per cent of the high school classrooms are below the State standard when pupil capacity is utilized as the divisor. Forty-one per cent of the high school classrooms are below standard in the number of cubic feet of air space allotted per student when student capacity is taken as the factor instead of the original number of children for whom the rooms were planned. The rather large percentage of rooms found below standard in the high school is due to the overcrowding of the high school and the necessity for placing more children in classes than is desirable for high school work and more than were originally planned when the rooms were built. The high school building itself, with its variation in sizes of classrooms, was well planned in this respect.

All of the regular classrooms of the elementary schools and of the high school have smooth plaster walls in good condition. Ninety-three and eight-tenths per cent of the rooms are colored cream or buff. This reveals a commendable effort on the part of the school authorities to establish proper standards for classroom decoration. All of the classrooms in the Hackensack schools are equipped with a small closet or a bookcase for supplementary readers, instructional and other supplies. The Survey Committee feels that additional closet space for such purposes would be a distinct advantage in any new construction

TABLE XV

DATA CONCERNING ROOM DIMENSIONS OF THE ELEMENTARY SCHOOLS AND HIGH SCHOOL OF HACKENSACK, N. J.

ELEMENTARY SCHOOLS

	Median	Standard*	Below Standard		Standard		Above Standard	
			Rooms	%	Rooms	%	Rooms	%
Area per child (pupil capacity),	20.97 sq. ft.	18 sq. ft.	4	5	1	1	76	94
Area per child (enrollment),	22.45 " "	18 " "	3	4	1	1	77	95
Area per child (40 in room),	18.4 " "	18 " "	26	32	35	43	20	25
Cubical feet per child (capacity),	256.9 cu. ft.	200 cu. ft.	0	0	0	0	81	100
Cubical feet per child (enrollment),	276.875 " "	200 " "	0	0	0	0	81	100
Cubical feet per child (40 in room),	212.5 " "	200 " "	0	0	2	2	79	98
Height of ceiling,	13.25 ft.	12 ft.	0	0	13	16	68	84

HIGH SCHOOL

Area per student (student capacity),	19.125 sq. ft.	18 sq. ft.	12	44	1	4	14	52
Area per student (40 in room),	14.64 " "	18 " "	17	63	3	11	7	26
Cubical feet per student (capacity),	208.9 cu. ft.	200 cu. ft.	11	41	7	26	9	33
Cubical ft. per student (40 in room),	172.5 " "	200 " "	17	63	5	18.5	5	18.5

* Standard as fixed by State of New Jersey Building Code, Revised to May 1, 1915. Laboratories and special rooms omitted.

TABLE XVI

HACKENSACK ELEMENTARY SCHOOLS COMPARED WITH FOUR OTHER SCHOOL SYSTEMS ON THE STANDARDIZATION OF THE NUMBER OF CUBIC FEET PER PUPIL

	Hackensack, N. J.	Passaic, N. J.*	Paterson, N. J.*	St. Paul, Minn.*	Amsterdam, N. Y.*
Per Cent *Below Standard*—					
On basis of Pupil Capacity,	0.	10.7	....	....	....
On basis of Enrollment,	0.	....	....	....	....
On basis of 40 in Room,	0.	7.3	36.8	1.2	7.14
Per Cent *At Standard*—					
On basis of Pupil Capacity,	0.	82.7	....	....	....
On basis of Enrollment,	0.	....	....	....	....
On basis of 40 in Room,	2.	72.9	55.9	27.4	83.04
Per Cent *Above Standard*—					
On basis of Pupil Capacity,	100.	6.6	....	....	....
On basis of Enrollment,	100.	....	....	....	....
On basis of 40 in Room,	98.	19.8	7.3	71.2	9.82

* Data secured from surveys of these school systems made by the Department of Educational Administration, Teachers College, Columbia University, N. Y. C.

That the situation in Hackensack is far better on the two elements of classroom area per pupil of pupil capacity and cubiture per pupil of pupil capacity than has been found in many other cities is shown in Table XVII. In this table are shown the facts for Paterson and Passaic, N. J., St. Paul, Minn., Amsterdam, N. Y., and Greensboro, N. C.

TABLE XVII

HACKENSACK'S CONFORMITY TO STANDARDIZATION OF THE CLASSROOM AREA PER PUPIL AS COMPARED WITH THAT OF FIVE OTHER CITIES

	Hackensack, N. J.	Passaic, N. J.*	Paterson, N. J.*	St. Paul, Minn.*	Amsterdam, N. Y.*	Greensboro, N. C.*
Per Cent *Below Standard*—						
On basis of						
Pupil Capacity,	5.	16.	....	....	.....	....
Enrollment,	4.	....	....	....	.....	....
40 in Room,	32.	6.	39.5	2.5	7.14	20.5
Per Cent *Standard*—						
On basis of						
Pupil Capacity,	1.	73.5	....	....	.....	....
Enrollment,	1.	....	....	....	.....	....
40 in Room,	43.	56.	49.	27.	68.75	61.5
Per Cent *Above Standard*—						
On basis of						
Pupil Capacity,	94.	10.5	....	....	.....	....
Enrollment,	95.	....	....	....	.....	....
40 in Room,	25.	38.	11.6	70.4	24.11	18.

* Data secured from surveys of these school systems made by the Department of Educational Administration, Teachers College, Columbia University, N. Y. C.

Another important element entering into consideration of the excellence of classrooms is the location of the classroom with respect to exits and with particular reference to fire exits. Evidently very much consideration has been given this problem in Hackensack. With the exception of School Building No. 2, the classrooms are in close proximity to exits which lead directly out of doors. This is most commendable and has been given due consideration in the rating of buildings. The smokeproof stairwells provided in the high school are particularly to be com-

mended and should be made a part of any future buildings constructed in Hackensack.

THE NATURAL ILLUMINATION OF CLASSROOMS

The standards for natural illumination provide that the glass area shall be one-fifth to one-quarter of the floor area; that the windows shall not be so far toward the front of the room that the children seated toward the back of the room must look into them; that the windows shall not be so low as to produce a direct glare on the desks nearest the windows; and that the light should come only from the left side of the room. Window shades, preferably translucent, should be provided for all classrooms. These shades should be of the double hung type and should operate from the center of the windows for convenience and efficiency in the regulation of light.

Nine and nine-tenths per cent of the elementary school classrooms have a ratio of window area to floor area below standard. Fifty per cent have a ratio higher than 19.73 per cent. In the high school building all the rooms are standard or above in this respect. Light enters all of the high school classrooms from the left only. This is true in 66.7 per cent of the elementary school classrooms. In 29.6 per cent of the elementary school classrooms light enters from the left and rear, and in only three rooms does light enter directly from the sides and front of the room. The median distance from the first window to the front wall is four feet in elementary school classrooms and three feet in the high school rooms. This permits too much light to fall directly in the faces of the pupils. The standard distance is five to seven feet. In the elementary classrooms the median height of windows from the floor is 36 inches. The median for high school rooms is 45 inches. In the elementary and high school classrooms the median height of windows above desk tops is 15 inches. Twelve inches and six inches is the median distance from the window top to ceiling in elementary classrooms and high schools respectively. The width of mullions varies from six and one-half inches in the newer buildings to six feet in the old buildings.

In Table XVIII are found comparisons between Hackensack and other cities with respect to natural illumination of classrooms. Although in some of Hackensack's buildings the situation is not superior, the table shows that Hackensack is, with respect to its median situation, in advance of these other communities.

TABLE XVIII

RATIO OF WINDOW AREA TO FLOOR AREA IN HACKENSACK AND SEVEN OTHER CITIES

PER CENT OF CLASSROOMS	Hackensack	Baltimore	Greensboro	Paterson	St. Paul	Denver	Salt Lake	Passaic
Below Standard,	60.4	75.4	.....	64.8	67.2	.....	.....	42.
Standard,	8.8	5.3	.....	2.5	6.2	.....	.....	16.
Above Standard,	30.8	19.2	.....	32.6	29.6	.....	.....	42.
Per Cent of Classrooms lighted from								
Left,	66.7	59.3	48.	*....	22.	57.	17.	59.
Left and Rear,	29.6	27.4	24.	.....	54.	34.	45.	28.
Left and Right,	.....	2.4	1.	.....	3.	0.	0.5	2.
Right and Rear,	.....	1.1	5.	.....	0.8	5.	0.5	4.
Right,	.....	1.3	3.	.....	0.1	0.9	0.3	1.
(Less than ½ from) Front,	.....	4.8	.....	.....	6.	2.	7.	.....
(More than ½ from) Rear,	.....	.9	.....	.....	10.	0.	22.	.....
(3) Sides,	.....	2.1	7.	.....	3.	1.2	8.	1..
(4) Sides,	.....	.1	.....	.....	0.	.3	0.	.....
Rear,	.....	.4	.....	.....	.1	.3	.2	1.
Left and Front,	3.7	.....	5.	.....	0.	0.	0.	4.
Overhead,	.....	.....	6.	.....	.8	0.	0.	.....

* Not given.

In the equipping of classrooms much importance should be attached to the location of blackboards. One means of measuring the adequacy of the installation of blackboards is through the determination of whether the blackboard heights are such as to meet the needs of the children who use the classrooms. In Table XIX will be found a distribution of classrooms according to the height of the chalk rail from the floor. It is considered that a blackboard with a chalk rail 24 and 25 inches high is approximately correct for the kindergarten, and that a blackboard 32 and 33 inches high is approximately correct for the eighth

grade. With such standard heights for all grades, it is seen in table that 57 per cent of the blackboards in the elementary schools are above standard and 20.9 per cent of the blackboards below standard as to their height. The median heights and the average heights for each grade are shown in Table XX. Probably no action can be taken by the Board of Education at this time to change this condition. It is well to bear in mind the fact that standardization in school buildings has even reached the point of this detail, and that in all future construction proper attention should be paid to this very important item.

TABLE XIX

NUMBER OF BLACKBOARDS OF VARIOUS HEIGHTS FROM THE FLOOR IN THE DIFFERENT GRADES OF THE HACKENSACK CITY SCHOOLS

INCHES	21	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	Total
Kindergarten	1		5																			6
First Grade		2	6							2	1											11
Second "			7			2		1		1												11
Third "					1	1			2	1					2		1				1	9
Fourth "								1	3		1	1	1		3						1	11
Fifth "								1	2						6	1						10
Sixth "								1	4	3			2								1	11
Seventh "															9							9
Eighth "															4						4	8
TOTAL	1	2	18	0	1	3	0	4	11	7	2	1	3	0	24	1	1	0	0	0	7	
High School															27							

Total Rooms Measured - 86

Rooms above standard - 49 - 57%
Rooms below standard - 18 - 20.9%
Rooms standard - 19 - 22.1%

TABLE XX

HEIGHTS OF BLACKBOARDS IN HACKENSACK CITY SCHOOLS
ELEMENTARY SCHOOLS

GRADE	Kdg'n.	1st	2d	3d	4th	5th	6th	7th	8th
Medium height—in inches,	23.4	23.58	23.78	30.5	33.5	36.3	31.5	36.5	38.5
Average height—in inches,	23.5	25.8	25.6	32.9	33.4	34.2	27.1	36.	39.7
Minimum height—in inches,	21.	23.	24.	26.	29.	29.	29.	36.	36.
Maximum height—in inches,	24.	32.	31.	42.	42.	37.	42.	36.	42.
Standard height—in inches,	24	25	26	27	28	29	30	31	32
	25	26	27	28	29	30	31	32	33
Per cent. of blackboards above standard height,	0	27.3	18.2	77.8	91.	70.	27.3	100	100
Per cent. of blackboards below standard height,	17.	72.7	63.6	11.1	0	0	9.	0	0
Per cent. of blackboards standard height,	83.	0	18.2	11.1	9.	30.	63.7	0	0

That Hackensack does not differ greatly from other school systems with respect to this condition is shown from Table XXI, giving conditions in other cities.

TABLE XXI

THE HEIGHTS OF BLACKBOARDS IN SIX CITIES

HEIGHTS OF BLACKBOARDS	Hackensack, N. J.	Paterson, N. J.*	Amsterdam, N. Y.*	Baltimore, Md.*	St. Paul, Minn.*	Passaic, N. J.*
Per cent above Standard,	57.	64.7	73.	56.9	78.	67.9
Per cent below Standard,	20.9	16.1	16.	23.4	10.	18.4
Per cent at Standard,	22.1	19.2	11.	19.7	12.	13.7

* Data secured from surveys of these school systems made by the Department of Educational Administration, Teachers College, Columbia University, N. Y. C.

THE SEATING OF CLASSROOMS

Hackensack is extremely fortunate in having planned the seating of its classrooms in such a way as to keep the number of elementary children under instruction at a point where the teacher does not feel overburdened. The median number of seats per room in the elementary school is 35. The median num-

ber of seats per room in the high school is 32. This number is excessive for the high school and re-emphasizes what has been stated above, namely, that the high school classes are overcrowded.

In the elementary schools 86 per cent of the rooms have single adjustable desks and seats and 6 per cent of the rooms have tables and chairs adapted to the heights and needs of the children. The remaining 6 per cent of the rooms have the single non-adjustable type of desk. Apparently the school authorities in Hackensack have considered the full importance of providing adjustable seats which will meet the needs of children of varying heights. Hackensack's conditions are very superior in this respect.

Hackensack is to be congratulated upon having spent the time, money and energy needed to produce this desirable result. In Table XXII are given the facts which show how superior Hackensack is to others in this field.

TABLE XXII

THE PERCENTAGE OF ADJUSTABLE AND NON-ADJUSTABLE SEATS IN THE ELEMENTARY CLASSROOMS OF FIVE CITIES

ELEMENTARY SCHOOLS	Hackensack, N. J.	Baltimore, Md.*	Omaha, Neb.	Paterson, N. J.	Passaic, N. J.
Per cent of Rooms with—					
Adjustable Seats,	88.8	3.8	6.—	50.	41.
Non-Adjustable (Single) Seats,	6.1	73.7	94.+	15.9	20.8
Non-Adjustable (Double) Seats,	.....	22.5	.....	27.2	.....
Tables and Chairs,	5.1	.....	.....	.....	.....
Adjustable and Non-Adjustable Seats,	.....	.....	.....	5.2	37.9

* Percentage of pupils in Baltimore.

THE ARTIFICIAL LIGHTING OF CLASSROOMS

In the elementary schools 27.2 per cent of the classrooms have no electric light provision. Nine and nine-tenths per cent have two electric lights in each room. Thirty and eight-tenths per

cent have four electric lights and 32.1 per cent have six electric fixtures in the classroom. All of the classrooms in the high school have from one to four electric outlets. The gas lighting which has been provided in some of the classrooms in the older buildings is not satisfactory for classroom purposes and probably never can be made satisfactory. Apparently the artificial lighting of classrooms has not received as much attention by school authorities as many of the other elements mentioned. Semi-indirect electric lighting, with fixtures which are affected to a minimum degree by the dust and dirt, is the lighting which meets with the approval of the best authorities to-day. As a rule, four of these fixtures do not suffice for the elementary classroom of maximum size.

Nine fixtures located as shown in Chart 3 will provide the best conditions, not only at a period immediately subsequent to their installation, but during the entire life of the school building.

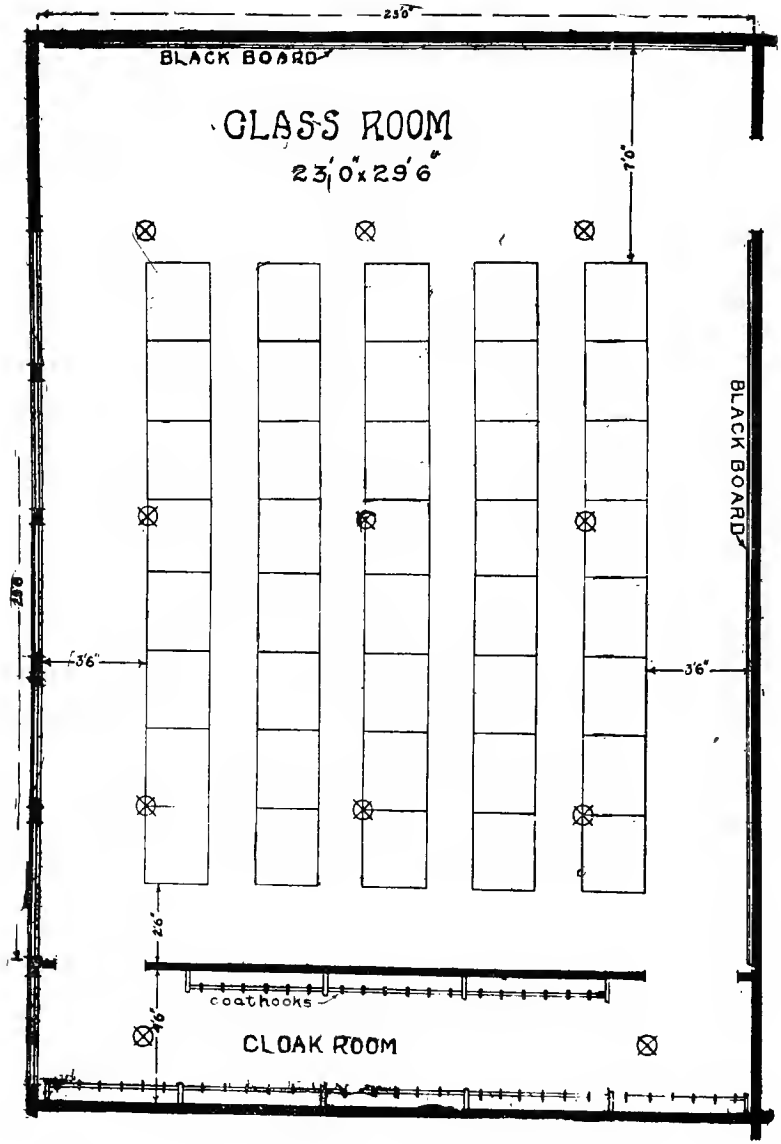
CLOAKROOMS IN CLASSROOMS

The cloakrooms of School No. 3 have been exceedingly well planned. They are under teacher control, are adequately lighted with natural light, and provide for a minimum of congestion for clothing of the children. The arrangement in the high school is also satisfactory in many respects and can only be made more satisfactory as lockers are provided as was originally intended.

The cloakrooms of Fairmount School No. 4 are rated low, as are also those of School No. 2 and School No. 5. In the Fairmount school, for instance, four cloakrooms on the first and second floors (front) are very poorly ventilated and without adequate natural light. Such conditions may be the cause for the spreading of disease, and in the planning of new buildings it is the opinion of the Survey Commission that as much consideration should be given the rooms in which children must hang their wraps as to the classrooms themselves.

It is expected that the cloakrooms of the older buildings, such as School No. 2, will rate low.

CHART No. 3.


23'0"
BLACK BOARD
CLASS ROOM
23'0" x 29'6"
7'0"
BLACK BOARD
23'0"
3'6"
3'6"
2'6"
coathooks
4'6"
CLOAK ROOM

COLOR SCHEME OF CLASSROOMS

Among the pleasing features of the school classrooms are the wall finishing and decorations. These elements which add so greatly to the development of the æsthetic nature of school children are frequently given little or no attention. Ninety-three and eight-tenths of the classrooms of the elementary schools have the standard color scheme of cream and buff coloring. School No. 4 is the only one which varies from this desirable coloring. Here four rooms have two colors, white and buff, and one room has white and brown. The high school building has classrooms with cream or buff-tinted walls. The number and quality of pictures found upon the walls of classrooms, halls and auditoriums speak well for the care used in making the school building interiors attractive. Hackensack clearly excels in schoolroom decoration.

SPECIAL ROOMS

(*Item V .....Strayer, Engelhardt Score Card.*)

Under the changing social and economic conditions the increasing importance of introducing into the public school work a richer curriculum than that involving mere classroom recitation has been recognized. Hackensack gives evidence in the special rooms provided in its buildings that it has long felt that the limited curriculum of the regular classroom is no longer adequate. Hackensack, through the agency of the physical facilities provided, is giving attention to the physical well being of the children in school, is giving opportunity for greater social contacts than are found in the classroom itself, and, in fact, is providing in some degree most of the special rooms which are deemed essential for elementary and high schools.

The scores allotted special rooms show that Hackensack's special room facilities are rated higher, taken as a whole, than those of many other cities, although in no case is the rating more than 100 points of the possible 140. Union Street School is rated lowest in its special room equipment. The special room facilities which have been deemed essential in the elementary

schools of a large city are to be found in the following list which includes provisions for classrooms, special rooms and service rooms in an elementary school recently adopted for all new construction by the Board of School Commissioners.

TABLE XXIII

STANDARD PROVISIONS FOR CLASSROOMS, SPECIAL ROOMS AND SERVICE ROOMS IN AN ELEMENTARY SCHOOL, BALTIMORE, MARYLAND

CLASSROOMS AND CLOAK ROOMS
- 1st Grade
- 2d Grade
- 3d Grade
- 4th Grade
- 5th Grade
- 6th Grade
- Ungraded

PRINCIPAL
- Office
- Storage
- Toilet
- Vault

STORAGE ROOM
- Text Books and General Supply

HEALTH SUPERVISION
- Physician's Room
- Toilet
- Dressing Booths
- Dental Clinic
- Nurse's Room (Psychological Clinic)
- Toilet

TEACHER'S ROOMS
- Kitchenette
- Lunch and Work Room
- Rest Room
- Toilet

LIBRARY
- Reading Room

KINDERGARTEN
- Assembly or Game Room
- Occupation Room
- Storage Room
- Toilet and Lavatory
- Cloak Room

AUDITORIUM-GYMNASIUM
- Main Floor
- Balcony
- Dressing Room
- Picture Booth
- Stage
- Director's Room
- Locker Rooms (Boys)
- Shower Baths (Boys)
- Store Room (under stage)
- Toilet (Boys)
- Locker Rooms (Girls)
- Shower Baths (Girls)
- Toilet (Girls)

COMMUNITY ROOM
- Community Room
- Toilet

LUNCH ROOM (PUPILS')
- Lunch Room (Pupils')
- Kitchen

HOUSEHOLD ARTS
- Cooking Room

HOME MAKING ROOMS
- Bed Room
- Dining Room

WOODWORKING
- General Shop

PLAYROOMS
- Playrooms—Boys
- Playrooms—Girls

ENGINEERING
- Engineer's Room
- Toilet
- Air Washer Room
- Ash Storage
- Boiler Room
- Coal Storage
- Fan Room
- Heating Chambers
- Plenum Chamber
- Supplies (Oil, etc.)
- Supplies (General)
- Switch Board
- Work Room

SERVICE DEPARTMENT
- Janitress' Room
- Supply Closet
- Toilet
- Janitor's Room
- Supply Closet
- Toilet
- Slop Sink Closets

PUPILS' SERVICE
- Bicycle Room
- Toilet Rooms (Boys and Girls)

The provision for special rooms made in the junior high schools of three large cities is shown in the following table, which includes the provisions for Rochester, Detroit and Buffalo. It will be seen by a comparison of these lists that Hackensack is not over-supplied with special rooms, nor is this city offering all of the opportunities for special room activities which might be offered.

TABLE XXIV

CLASSROOM AND SPECIAL ROOM PROVISIONS IN THE JUNIOR HIGH SCHOOLS OF THREE CITIES, 1921

	Rochester	Detroit	Buffalo
Auditorium,	+	+	+
Balcony,	+		+
Chair Store Room,	+		
Dressing Room—Boys',	+		
Dressing Room—Girls',	+		
Operator's Booth,	+		
Applied Science Room,	+		
Classrooms,	+	+	+
Commercial Rooms,	+		
Bank,	+		+
Bookkeeping,	+		+
Penmanship,			+
Stenography,	+		+
Typewriting,	+		+
Conservatory,	+	+	+
Fan Room,	+		
Gymnasium,		+	+
Indoor,		+	+
Locker Rooms—Boys',	+	+	+
Locker Rooms—Girls',	+	+	+
Outdoor (Playrooms),		+	+
Showers—Boys',		+	+
Showers—Girls',		+	+
Industrial Arts—Boys:			
Art Room,		+	
Drawing—Freehand,	+		
Mechanical,	+	+	+
Electrical,	+		+
Garage,	+		
Machine Shop,	+		
Mill and Assembly Room,	+		
Painting and Finishing Room,	+		+
Printing,	+		+
Sheet Metal Shop,	+		+
Stock Room,	+		+
Woodworking,	+	+	+
Industrial Arts—Girls:			
Art Room,		+	+
Arts and Crafts,			+
Cooking	+	+	+
Home-making,			+
Millinery,			+
Pattern Making,	+		
Sewing,	+	+	+
Kindergarten,		+	
Laboratory—Science,	+		+
Laundry,	+		
Lecture Room,	+		+
Library,	+	+	
Literature,		+	

TABLE XXIV—(*Continued*)

	Rochester	Detroit	Buffalo
Locker Rooms,	+	+	
Lunch Rooms or Cafeteria,	+	+	+
Boys,	+	+	
Girls,	+	+	
Teachers,			
Dining Room,	+		
Private Dining Room,	+		
Kitchen,	+	+	+
Medical Rooms:			
Clinic,	+	+	+
Doctor's Office,	+		
Infirmary,	+		
Waiting Room,	+	+	
Office:			
Assistant Principal,			+
Clerks,	+		
Principals,	+	+	+
Visitors' Waiting Room,	+		
Public Speaking,			+
Rest Rooms:			
Men's,	+		
Pupils',			+
Teachers',			+
Women's,	+		
Science Rooms,	+	+	+
Store Rooms,	+		
Janitors',	+		
Oil,	+		
Paper,	+		
Stock,	+		
Study Room—Teachers',	+		
Toilets,	+	+	
Work Room—Teachers',			+

Note—The facts for Rochester have been obtained from floor plan of the Jefferson Junior High School.

The facts for Buffalo were obtained from the floor plans of the Buffalo Junior High Schools reproduced in the School Board Journal, February, 1921.

The facts for Detroit are taken from blue prints of Detroit buildings.

Symbol + = provision for room has been made.

PLAYROOMS

The playrooms of the No. 1 School, with their low ceilings, limit the kinds of games that can be played there, and therefore are merely exercise rooms. Union School No. 2 has no room

which is used for play purposes. The two playrooms on either side of the auditorium in School No. 3 have been well conceived and are sufficiently large for group games and for calisthenics. With the physical director's offices adjacent, the equipment in this building may be considered high grade. School No. 5 has one schoolroom in the basement called the playroom. It is limited in size. The concrete floor of this, as well as the other playrooms, lessens some of the good results that may come from physical activity. A wooden floor adds considerably to the comfort and the physical returns. The three rooms in the basement of School No. 4, which were used as playrooms in the winter, are desirable assets to this school. The playrooms in this last school, as well as those in the other old schools, indicate that the Board of Education has made a very commendable effort to secure the play provisions where they were lacking, even though it was impossible to bring them up to the most desirable standard. In all future elementary construction playrooms should be included in the original planning, and should be given a location in the building which will permit a maximum circulation of fresh air.

The gymnasium provided in the high school meets a very great need. The provisions for physical directors' offices, for showers and locker rooms, are fairly conveniently planned. It is unfortunate, however, when this building was erected, that more space was not allotted to provisions for physical training. The gymnasium is not well located, is poorly ventilated and the shower and locker equipment is not adequate. When additions are made to this building, as is even now necessary, a maximum of attention should be given to the development of this school facility.

SCHOOL AUDITORIUMS

Schools Nos. 1, 2, 4 and 5 have assembly rooms on the floor above the regular classrooms. In all modern construction, the assembly room is placed on the first floor or ground floor level, as has been done in School Building No. 3 and in the High School building. The auditoriums on the fourth floor of School

No. 2 and on the third floor in the other old schools are very unsatisfactory. The administrative officers have done well to discontinue the use of the auditorium in School No. 5. Although in the other schools many safeguards have been erected in order to prevent disaster, auditoriums on top floors of school buildings can never be considered satisfactory.

Loose seats and open fire escapes, the value of which is questioned, add to the hazard involved in the use of these auditoriums. The auditoriums of School No. 3 and the High School contrast greatly with the auditoriums of the older buildings. The commodious stage, the dressing rooms and the equipment furnished afford opportunities which are lacking in the other schools. The motion-picture equipment in these schools, as well as that which has been installed in School No. 1, is the equipment that ought to be provided in every school building.

In the High School the Board of Education has sought to utilize the balcony of the auditorium as a study room. In many ways this has proven to be very satisfactory. The heating and ventilating of this balcony, when it is closed off from the rest of the auditorium, has proven, however, to be very unsatisfactory. Without doubt the room proves to be a better study room in the winter than in the summer. In any future construction, if similar study hall provisions are made, it becomes necessary to give far greater consideration to the heating and ventilating than has been done in this case. It will be wise to give this matter attention at this time.

LIBRARIES

Schools Nos. 1 and 3 have a room used for reading and reference work. These rooms are small and provide little table space for library work. It will be wise, in all future construction, to provide ample library space in elementary schools. It may even be desirable, when new classrooms are added to the school system, to set aside one classroom in the present school buildings as a library room. Children should be given a maximum of opportunity in school to come in contact with all kinds of desirable books and literature. This opportunity cannot be given in the

ordinary classroom to the degree that can be done in a library room.

The library room of the high school building suffices for a small high school enrollment. It will prove inadequate in size as the high school grows, if it has not already done so. The Board of Education should expend a maximum of effort in increasing the value of this library by making generous contributions for library books and by maintaining its contributions for the good current literature which is in evidence here.

LUNCH ROOMS

Lunch rooms have been provided in the High School and in School No. 3. In the planning of the high school building the lunch room was located in the basement where it is adequately lighted and does not present the wholesome atmosphere that should prevail in such room. The lunch room should be one of the most attractive rooms in a high school and should be utilized by the school staff, not only as a place for the mere consumption of food, but also for securing for children the social and educational values which may result from high grade physical conditions and proper instruction during this period.

The lunch room of the No. 3 school was found necessary after this building was utilized as an upper-grade center. Much effort has been expended in endeavoring to make the lunching conditions here satisfactory.

OFFICERS' ROOMS

The offices of the supervising principal in School No. 3 have been well planned and are suited for the needs of the chief officer of the school system. In the High School the offices are small and are not well planned. With the increase in size of this building these offices will prove to be inadequate.

In School No. 1 the principal's offices are on the first floor at the left of the main entrance. In School No. 4 and No. 2 the office provision is on the second floor, and in No. 5 it is off of the first floor. In all cases the principals' offices show evidence of the kind of record-keeping and administrative activities which

are highly essential to the success of a school. Equipment, such as mimeographs, filing devices, typewriters and the like, is being well used. The offices, however, in the older schools are small and the arrangement is not entirely satisfactory. Such is particularly true in School No. 5. The Board of Education will find it profitable to continue to supply the administrative officers all of the essential equipment for their work. As added equipment tends to make more convenient the administrative work of an officer, to the greater degree will supervision be done by these officers. There is every evidence that the principals are anxious even to increase the amount of supervision of classroom instruction which they are to-day doing.

TEACHERS' ROOMS

There should be rooms in every school building which are set aside distinctly for teachers' use. Such provision has been made only partially in Hackensack. Where a room for teachers has been provided it should be equipped with rugs, wicker rockers and chairs, reading table, stand, couches, washbowl and toilet. Whenever such a room serves a double purpose its value as a teachers' rest room or study room decreases. The high school has rooms devoted to men and women teachers and also a room devoted exclusively to nursing and pupil rest. This is the provision that ought to be made in every large elementary as well as high school building.

JANITORS' AND SUPPLY ROOMS

In the planning of school buildings, not sufficient attention is given to the needs of the school caretakers. A small workroom where minor repairs can be done and also a janitor's room located near the boiler room, equipped with washbasin, sink, telephone and supply cabinets, should be provided in every new building. In certain degrees are these standards met in Schools No. 1, 3 and 4 and the High School. The provision in No. 2 and in No. 5 is entirely inadequate. In the new buildings, No. 3 and the High School, high-grade provision has been made for

the storage of educational supplies and for text books. In the older buildings, this provision is also inadequate. Such supply rooms should be in close proximity to the principal's office and it should be so possible to arrange and plan them that the detail work of the principal in connection with the handling of supplies may be reduced to a minimum. The Board of Education should seek every opportunity for improving the supply room facilities in the older schools.

LABORATORIES

The standard laboratories for an elementary school are an industrial arts shop for boys and a household arts suite of rooms for girls. The laboratories of a high school depend entirely upon the curriculum that is being followed. In rating the laboratories of the school buildings of Hackensack, the highest credit was given the high school and the lowest credit to School No. 2. The general plan and the equipment of the science laboratories in the No. 3 school and in the high school, and the drawing room provision in the high school are very satisfactory. The industrial arts equipment and the household arts equipment are not as satisfactory as they can be made for the city of Hackensack.

The Measurement

OF THE

Classroom Achievements of Children

Reading
Handwriting
English Composition
Spelling
Arithmetic
Algebra
Latin

CONTENTS

	PAGE
Silent Reading,	75
Grade Distribution of Silent Reading Scores,	80
Comparison of Scores by Ages,	83
The Quality of Handwriting,	85
The Measurement of English Composition,	90
Spelling,	97
Age Distribution of Spelling Ability,	99
Arithmetic Tests,	102
Distribution of Woody Scores by Ages,	112
The Courtis Tests in Arithmetic,	113
The Distribution by Schools,	114
Distribution of Courtis Scores by Ages,	117
Stone Reasoning Tests in Arithmetic,	119
Algebra,	122
Latin,	125

TABLES.

TABLE.		PAGE.
I.	Grade and School Summary of Reading Scores,	76
II.	The Comparison Between the Achievements in Silent Reading in Hackensack and in Other Cities,	78
III.	Grade Distribution and Summary of Reading Scores—Thorndike-McCall Silent Reading Scale—Form No. 1, June 3d, 1921,	82
IV.	Comparison of Hackensack with Baltimore in Silent Reading—Thorndike-McCall Reading Scale,	84
V.	Scores in Silent Reading—Grades 3 to 12—Hackensack, N. J., June, 1921, Distributed According to Ages,	85
VI.	Distribution of Handwriting Scores by Grades,	87
VII.	Handwriting Scores—Comparison by Grades with Other Cities (Thorndike Handwriting Scale),	87
VIII.	Distribution of Handwriting by Ages,	88
IX.	Distribution of Scores of Hackensack, N. J., Elementary Schools (Grades 3 to 12) on English Composition, Scored by the Nassau County Supplement to the Hillegas Scale,	95
X.	Distribution of Scores of Hackensack, N. J., Elementary Schools (Grades 3 to 9) on English Composition, Scored by the Nassau County Supplement to the Hillegas Scale,	95
XI.	Comparison of Hackensack Elementary Schools with Schools in Other Cities in English Composition—Scored by the Nassau County Supplement to the Hillegas Scale,	96
XII.	Comparison by Grades of Spelling Scores in Hackensack and Elsewhere,	98

TABLE PAGE.
XIII. Grade and School Summary of Spelling Scores—Median Number of Correctly Spelled Words from a list of Twenty-five Words Selected from Buckingham Extension of Ayres Spelling Scale, ... 99
XIV. Comparisons by Ages of Spelling Scores—Hackensack and Baltimore, ... 100
XV. Distribution by Grades and Scores—Woody Addition Tests—Series B., ... 105
XVI. Distribution by Grades and Scores—Woody Subtraction Tests—Series B., ... 106
XVII. Distribution by Grades and Scores—Woody Multiplication Tests—Series B., ... 107
XVIII. Distribution by Grades and Scores—Woody Division Tests—Series B., ... 108
XIX. Hackensack Arithmetic Scores Compared with Six Other Cities—Woody Tests—Series B., ... 109
XX. Hackensack Arithmetic Scores Compared with Six Other Cities—Woody Tests—Series B.—Subtraction, ... 109
XXI. Hackensack Arithmetic Scores Compared with Six Other Cities—Woody Tests—Series B.—Multiplication, ... 110
XXII. Hackensack Arithmetic Scores Compared with Six Other Cities—Woody Tests—Series B.—June, 1921—Division, .. 110
XXIII. Comparison of Scores in Hackensack and Other Cities by Grades—Courtis Arithmetic Test—Series B., ... 118
XXIV. Distribution of Scores in Courtis Arithmetic by Schools, .. 115
XXV. Distribution of Scores in Arithmetic by Ages—Courtis Research Test—Series B., ... 118
XXVI. Results in Stone Reasoning Tests, ... 120
XXVII. Comparative Scores in Hotz Algebra Tests—Series B., ... 123
XXVIII. Distribution of Henmon Latin Sentence Scores by Years of Study and Distribution of Henmon Latin Sentence Scores by Grades, ... 126

CHARTS.

CHART. PAGE.
1. The Graphic Comparison in Silent Reading Attainments Between Hackensack and Other Cities, ... 79
2. Distribution of Hackensack Reading Scores by Ages—Thorndike-McCall Reading Scale—Form 1, ... 80
3. Comparison of Hackensack Median Scores in Handwriting with Other Cities—Thorndike Handwriting Scale, ... 89
4. Distribution of Handwriting by Ages in Hackensack—Thorndike Handwriting Scale, ... 90
5. Comparison of Hackensack Median Scores with Other Cities in English Composition—Scored by Nassau Supplement to Hillegas Scale, ... 96

PAGE.

6. Distribution of Hackensack Scores in Spelling by Ages—25 Selected Words—Columns H-F—Buckingham-Ayres, ... 101
7. Comparison of Hackensack Achievements in Spelling by Grades with Baltimore and Standards—Selected List—25 Words—Column H-F—Buckingham-Ayres, ... 102
8. Comparison of Hackensack Grade Scores in Arithmetic with Woody Standard, ... 111
9. Distribution of Hackensack Median Scores in Arithmetic—Woody Tests—Series B, ... 112
10. Comparison of Hackensack Scores in Courtis Arithmetic Test—(Series B)—With Average City Standards, ... 116
11. Distribution of Scores in Arithmetic by Ages—Courtis—Series B, 119
12. Comparison of Hackensack with Standards and Butte in Stone Reasoning Test in Arithmetic, ... 121
13. Median Grade Scores of Various Hackensack Classes in Hotz Algebra Tests—Series B., ... 124

The Measurements of the Classroom Achievements of Children

SILENT READING

Much of the instruction in the grades of a public school system can only function to the degree that children are able to interpret the printed or written page. In order to ascertain whether the children of Hackensack have acquired ability in interpreting paragraphs of the difficult kind with which they daily come in contact, a scale was applied for the purpose of measuring their ability in silent reading. The scale used was the Thorndike-McCall Reading Scale for the Understanding of Sentences, Form I.* This scale was applied to classes beginning with Grade 3B and ending with the senior class of the high school. A total of 1,400 children were tested with the use of this scale. An effort was made to secure a fair sampling of the children of all abilities in all of these grades.

The Thorndike-McCall Reading Scale consists of a number of paragraphs graded in difficulty. The first paragraph is read with ease by average children in all grades but the last presents difficulties in its interpretation to even the best children of the senior high school grade. A certain number of standardized questions are asked with respect to each paragraph and the children are rated on their answers to these questions. The simplest paragraph with its questions is given below. The most difficult paragraph, which is a selection from one of Coleridge's poems, is also given here.

(Simplest Paragraph.)

Thorndike-McCall Reading Scale, Form I.

On Monday Dick saw a red fox, a gray squirrel and a black snake in the woods. The next day he saw a brown rabbit and five brown mice in the field. He killed the fox and all the mice, but let the others live.

1. What was the name of the boy who saw the mice? .....
2. On what day did he see the mice? .....
3. What color was the fox? .....

* Thorndike-McCall Reading Scale, Bureau of Publications, Teachers College, Columbia University.

(Last Paragraph)

COLERIDGE

I see thee pine like her in golden story
Who, in her prison, woke and saw, one day,
The gates thrown open—saw the sunbeams play
With only a web 'tween her and summer's glory;
Who, when the web—so frail, so transitory,
It broke before her breath—had fallen away,
Saw other webs and others rise for aye,
Which kept her prisoned till her hair was hoary.
Those songs half-sung that yet were all divine—
That woke Romance, the queen, to reign afresh—
Had been but preludes from that lyre of thine,
Could thy rare spirit's wings have pierced the mesh
Spun by the wizard who compels the flesh,
But lets the poet see how heav'n can shine.

32. What appeared after a similar thing disappeared? .....
33. What word not in the last three lines, although in the last six lines, indicates a failure to attain perfect poetic truth? .....
34. State in ordinary English just why the songs lacked perfection .....
.....
35. Whose songs were half-sung? .....

The scores on this scale run from 22 to 89, 22 being the lowest possible score and 89 being the highest possible score. The average or mean scores obtained by the Hackensack pupils during the first week in June, 1921, were those shown in Table I.

TABLE I

GRADE AND SCHOOL SUMMARY OF READING SCORES

Thorndike-McCall Reading (Form No. 1)—June 3d, 1921

SCHOOL	3D GRADE		4TH GRADE		5TH GRADE		6TH GRADE		7TH GRADE				8TH GRADE	
									B			A	B	
	B	A	B	A	B	A	B	A	Com.	Man. A.	Acad.	Com.	Com.	Man. A.
Number 1, ...	28.2	32.5	34.9	38.0	37.9	....	....	....	....	....	....	....	....	....
" 2, ...	32.3	37.0	40.3	44.1	43.7	48.8	49.4	53.2	....	....	....	....	....	....
" 3, ...	....	....	....	42.3	46.5	....	51.1	51.0	48.6	47.7	57.3	56.2	61.5	55.9
" 4, ...	35.8	38.6	40.3	40.8	45.7	49.6	52.5	55.1	....	....	....	....	....	....
" 5, ...	34.1	36.3	....	....	....	....	....	....	....	....	....	....	....	....
Years,	I		II		III		IV							
HIGH SCHOOL	61.0		64.6		66.5		72.4							

The tests were given in classrooms selected at random. Not all children were tested but selections were made from all schools. Table I shows the differences in results by grades and schools. It will be noted that School No. 1 ranks uniformly low in all its grades and that the honors for highest ratings are divided between Schools No. 2, No. 3 and No. 4. In a few instances, irregularities in progress occur. For instance, Grade 5B, School No. 1, ranks slightly lower than Grade 4A of the same school. Grade 7A Commercial ranks slightly lower than 7B Academic. In the majority of instances, progress is shown from one grade-section to the next higher, although such progress is by no means regular. The greatest regularity in progress is shown in the high school.

This test has been given at different periods of the year in other cities. The reading scores for all of these cities have been corrected to June 1st of the year in which they had been given on the assumption that progress between the date of the test and June 1st would, in each grade, be at the same rate as progress made before the test was given.

Table II gives the comparisons between the achievements in silent reading in Hackensack and in these other cities in which the tests were given.

Chart I shows a graphic comparison in these silent reading attainments between Hackensack and the other cities.

TABLE II

COMPARISON OF READING SCORES IN HACKENSACK AND ELSEWHERE

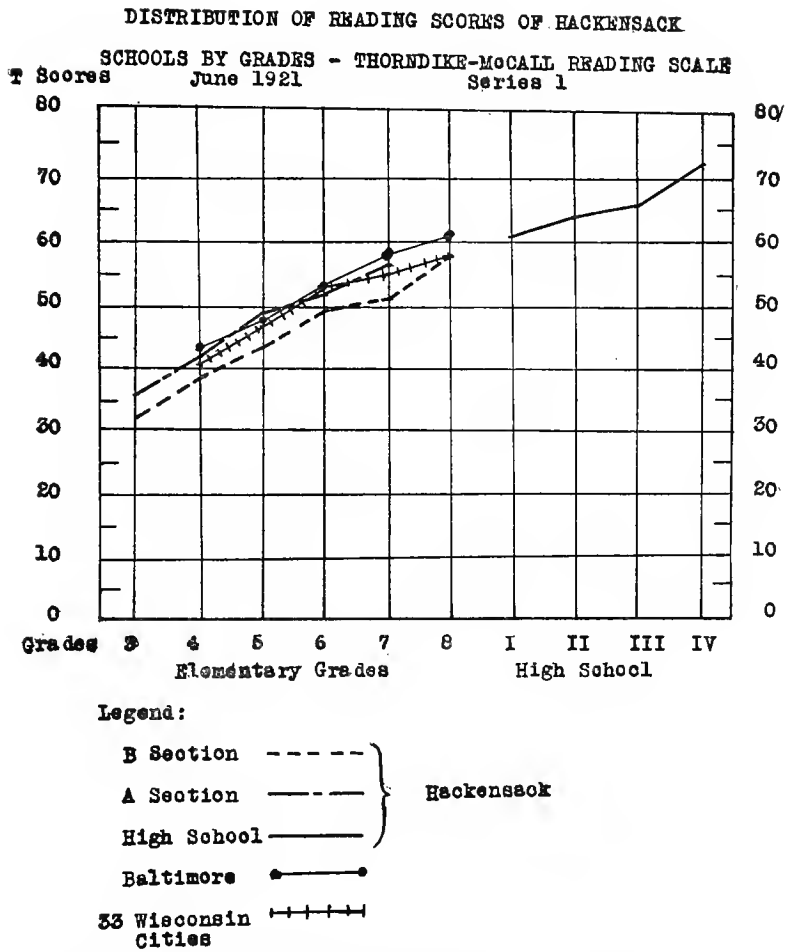
(Thorndike-McCall Reading Scale)

Scores Calculated as of June First

CITY	GRADE		GRADE		GRADE		GRADE		GRADE		GRADE		HIGH SCHOOL			
	3 B	3 A	4 B	4*	5 B	5	6 B	6	7 B	7	8 B	8	I	II	III	IV
Baltimore (white) pupils, ..	.....	.....	.....	43.3	.....	47.8	.....	53.1	.....	58.1	.....	61.2	.....	.....	.....	.....
33 Wisconsin cities, ...	.....	.....	.....	40.9	.....	47.2	.....	52.6	.....	55.3	.....	58.0	.....	.....	.....	.....
Paterson, N. J., ...	.....	.....	.....	35.5	.....	40.9	.....	49.0	.....	51.7	.....	53.5	.....	.....	.....	.....
St. Paul, Minn., ...	.....	.....	.....	41.8	.....	46.3	.....	53.5	.....	58.0	.....	62.5	.....	.....	.....	.....
Louisville, Ky., ...	.....	.....	.....	39.1	.....	43.6	.....	51.7	.....	59.8	.....	60.7	.....	.....	.....	.....
Hackensack, N. J., ...	32.3	36.4	38.4	41.4	43.4	49.3	49.9	51.9	51.2	56.2	58.5	.....	61.0	64.6	66.5	72.0

* The Hackensack scores are for 4A, 5A, 6A, etc., while the other scores are complete grade scores.

CHART No. 1



In Table II are included the results from Baltimore, Md., Paterson, N. J., St. Paul, Minn., Louisville, Ky., and thirty-three Wisconsin cities. Hackensack does not rank first among the cities in any one single grade, except Grade 5. In other grades, it ranks third, fourth or fifth in this group.

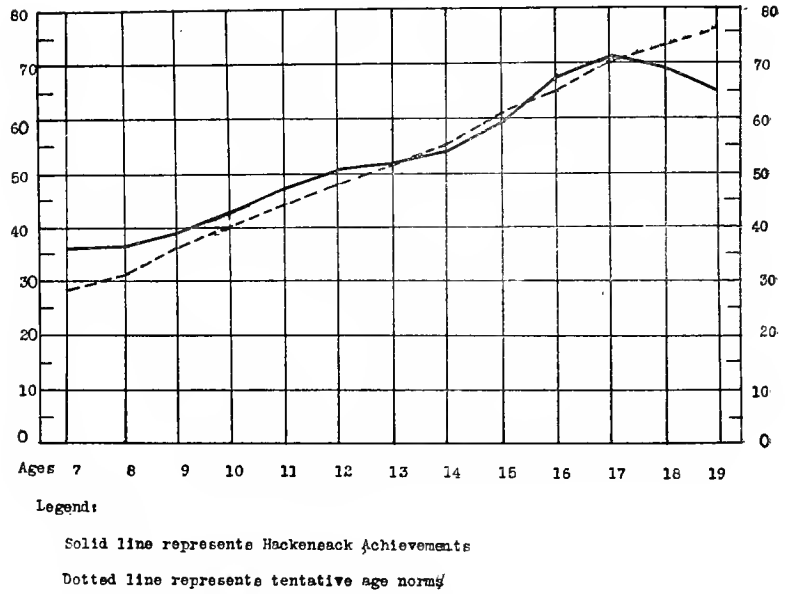
It should be borne in mind that the Hackensack scores are for grade sections and the scores for the other cities are for entire grades. All scores have been calculated as of June 1st. Again from this table, it seems that good progress is being made from

grade to grade except in the transition period from Grade 6 to Grade 7B. It may be said in general that the average ability in silent reading of the pupils of Hackensack is as high as that of pupils in other schools. The graphic comparison in Chart 2 shows this relationship.

CHART No. 2

DISTRIBUTION OF HACKENSASK READING SCORES BY AGES

Thorndike-McCall Reading Scale—Form 1



GRADE DISTRIBUTION OF SILENT READING SCORES

In Table III the facts summarized in previous tables are given in the form of a distribution of all of the scores obtained. It will be seen that some children in Grades 3 and 4 scored zero on this test, while other children in the same grades scored at 47 or above. The very significant fact about this table is that there is great overlapping between the grades. Some children in the 3d Grade have proved their ability to read silently as well as chil-

dren in the 7th Grade. In fact, there are children in the 7B Grade who secured a score as low as 36, while the highest score in the 3d Grade was 47. There was one pupil in the upper year of the high school who secured a perfect score and others who secured very high ratings. The wide distribution in scores emphasizes the need for further differentiation of children according to abilities and instruction according to abilities in all grades. Hackensack has already begun a program tending in this direction, and it is to be hoped that more intensive classification of children will be continued.

TABLE III

GRADE DISTRIBUTION AND SUMMARY OF READING SCORES—THORNDIKE-MCCALL SILENT READING SCALE

FORM NO. 1, JUNE 3D, 1921

T. SCORES	GRADES														
	3D GRADE		4TH GRADE		5TH GRADE		6TH GRADE		7TH GRADE		8TH GR.	I	II	III	IV
	B	A	B	A	B	A	B	A	B	A	B				
22,	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
24,	5	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
26,	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
27,	4	3	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
28,	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
28.5,	3	2	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
29,	5	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30,	6	3	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31,	8	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
31.5,	5	9	.....	2	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
32,	4	5	2	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
33,	6	8	4	1	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
34,	8	8	9	4	2	.....	1	.....	.....	.....	.....	.....	.....	.....	.....
35,	6	14	3	8	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
36,	4	16	7	10	7	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
37,	9	6	7	5	5	.....	.....	.....	3	.....	.....	.....	.....	.....	.....
38,	4	6	9	13	7	1	2	1	1	.....	.....	.....	.....	.....	.....
40,	3	2	7	14	8	2	5	2	.....	.....	.....	.....	.....	.....	.....
41,	3	8	6	12	11	2	3	2	2	.....	.....	.....	.....	.....	.....
43,	1	6	5	8	11	2	6	2	4	.....	.....	.....	.....	.....	.....
45,	1	4	8	11	8	9	8	8	7	.....	1	.....	1	.....	.....
47,	2	2	5	11	16	6	4	2	13	.....	3	.....	.....	.....	.....
49,	.....	2	2	8	13	10	11	10	13	1	2	.....	.....	.....	.....
51,	.....	2	1	4	2	9	6	14	11	6	2	2	.....	1	.....
53,	.....	.....	2	1	7	6	14	8	8	5	6	1	3	2	1
55,	.....	.....	.....	2	2	4	14	14	10	6	8	1	1	2	1
57,	.....	1	.....	1	1	5	9	9	5	5	9	1	3	4	.....
59,	.....	.....	.....	1	.....	3	5	8	7	3	6	9	2	3	1
61,	.....	.....	.....	.....	.....	.....	3	4	2	4	8	5	3	11	2
65,	.....	.....	.....	.....	1	.....	3	1	3	2	6	6	8	12	12
69,	.....	.....	.....	.....	.....	.....	1	2	2	1	4	4	6	13	7
74,	.....	.....	.....	.....	.....	.....	.....	1	1	.....	4	.....	7	10	13
77,	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	8	9
80,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	8
84,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
89,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Total,	102	110	87	121	110	60	95	89	93	33	59	29	35	67	57
Average or Mean,	32.3	36.4	38.4	41.4	43.4	49.3	49.9	51.9	51.2	56.2	58.5	61.	64.6	66.5	72.

In Appendix A will be found the distribution of scores for each section of each grade in which the test was given. The wide differences discovered in any one section and the great overlapping between grades in individual schools bear out the need for this more intensive classification mentioned above.

COMPARISON OF SCORES BY AGES

Because of the different methods employed in cities in other states in the grading of children, an age comparison of scores is more satisfactory. Unfortunately, age data are not available for any city, except Baltimore, on the Thorndike-McCall Reading Test.

Table IV gives the age results for Hackensack and for Baltimore. In the case of Hackensack the scores are given by ages for elementary schools, by ages for the high school and by ages for the entire school system, combining the elementary and high school groups. It will be noted that the children in the high school do better work than the children in the elementary school of the same ages. In fact, the differences in scores between these two groups are very marked. It will also be noted that the Baltimore scores for children in the elementary school, 7, 8, 9 and 10 years old, are higher than the scores for the children of the same age in the Hackensack elementary schools. The elementary children, beginning with the 11-year olds, are better able to read in Hackensack than children of the same ages in Baltimore. It is difficult to account for the low scores in Hackensack in the early ages, 7 to 10. Baltimore has a very large proportion of foreign children, probably even a greater percentage than Hackensack. Apparently greater stress is laid upon reading ability in the lower ages in Baltimore than in Hackensack. The differences in ability found in the elementary and the high school between children of the same age group point out that in Hackensack the brighter children move more rapidly into the high school than the children who are less bright, and also indicate that the Hackensack High School is a selective agency selecting children of ability rather than children of low capabilities regardless of the age of the child.

TABLE IV

COMPARISON OF HACKENSACK WITH BALTIMORE IN SILENT READING*
Thorndike-McCall Reading Scale

	AGES													
	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Hackensack Elementary Schools,	36.1	36.5	39.0	42.6	47.5	50.1	51.3	52.1	49.0	53.5	0	59.0	0	0
Hackensack High School, ...	....	....	....	....	....	59.0	63.9	62.3	65.1	68.1	70.2	68.1	65.0	75.5
Hackensack Elementary and High School, ..	36.1	36.5	39.0	42.6	47.5	50.5	51.8	54.4	59.5	67.5	70.2	67.5	65.0	75.5
Baltimore Elementary Schools,	40.7	40.7	41.6	43.8	46.0	48.1	50.0	50.5	49.1	53.6	45.0	....	....	....

* As computed June, 1921.

Table V shows the age distribution of scores in the elementary grades and high school combined. It will be noted that one 14-year-old child scores as low as an 8-year-old child, and that there is one 10-year-old child that scores as high as a 20-year-old child, and that there are many children of the ages 9, 10, 11 and 12 who rate as well, as measured by this test, as children 16, 17, 18 and 19 years old. These facts have a very vital bearing upon the classification of children in the school. They point out that the commonly accepted grade classification on an age basis is no longer a satisfactory means of grouping children. More and more should Hackensack develop a program for classification and grading of children which will involve the mental abilities of these children as well as their chronological ages.

The age distributions for the high school and elementary schools taken separately are shown in Tables B and C of the Appendix.

TABLE V

SCORES IN SILENT READING—GRADES 3 TO 12—HACKENSACK, NEW JERSEY
JUNE, 1921—DISTRIBUTED ACCORDING TO AGES

NUMBER OF CORRECT ANSWERS	T. SCORES	AGES													
		7	8	9	10	11	12	13	14	15	16	17	18	19	20
0, ...	22	....	1	1	....	....	....	....	1	....	....	....	....	....	....
1, ...	24	....	3	1	....	1	....	....	....	....	....	....	....	....	....
2, ...	26	....	2	1	2	2	....	....	....	....	....	....	....	....	....
3, ...	27	....	1	3	4	....	1	....	....	....	....	....	....	....	....
4, ...	28	....	4	2	2	1	....	....	....	....	....	....	....	....	....
5, ...	28.5	....	1	1	1	2	....	....	....	....	....	....	....	....	....
6, ...	29	....	4	2	1	....	....	....	....	....	....	....	....	....	....
7, ...	30	3	5	5	....	....	....	1	....	....	....	....	....	....	....
8, ...	31	....	5	5	1	....	....	....	....	....	....	....	....	....	....
9, ...	31.5	3	3	5	4	1	2	....	....	....	....	....	....	....	....
10, ...	32	....	5	4	2	3	....	2	....	....	....	....	....	....	....
11, ...	33	....	4	10	2	1	2	....	....	1	....	....	....	....	....
12, ...	34	1	7	8	9	2	2	....	1	....	....	....	....	....	....
13, ...	35	2	9	12	9	7	1	4	1	....	....	....	....	....	....
14, ...	36	3	8	13	9	2	3	2	1	....	....	....	....	....	....
15, ...	37	1	10	9	2	1	2	1	1	1	....	....	....	....	....
16, ...	38	2	5	7	17	8	6	3	2	....	1	....	....	....	....
17, ...	40	2	6	10	9	6	5	3	....	1	....	....	....	....	....
18, ...	41	1	8	14	12	11	1	2	1	1	....	....	....	....	....
19, ...	43	....	4	11	10	10	6	5	3	....	....	....	....	....	....
20, ...	45	1	7	10	14	9	10	9	2	2	1	....	....	....	....
21, ...	47	1	3	13	21	12	8	13	5	2	....	....	....	....	....
22, ...	49	....	4	9	4	7	16	7	8	1	....	....	....	....	....
23, ...	51	....	2	4	5	14	9	11	5	6	....	....	....	....	....
24, ...	53	....	....	4	9	17	11	11	6	7	....	....	1	....	....
25, ...	55	....	1	....	8	16	15	14	3	2	3	1	....	....	....
26, ...	57	....	....	2	5	7	9	10	6	2	2	2	1	....	....
27, ...	59	....	....	1	3	10	9	5	13	5	....	1	1	....	....
28, ...	61	....	....	....	....	....	8	8	8	3	10	1	2	....	....
29, ...	65	....	....	....	2	5	4	7	7	7	6	11	3	2	....
30, ...	69	....	....	....	....	1	4	4	6	3	16	4	....	....	....
31, ...	74	....	....	....	1	2	2	3	1	7	9	8	4	....	1
32, ...	77	....	....	....	....	....	....	1	1	3	9	1	3	....	1
33, ...	80	....	....	....	....	....	....	....	....	2	2	6	....	....	....
34, ...	84	....	....	....	....	....	....	....	....	....	....	2	....	....	....
Total Number, ...		20	112	167	168	158	136	126	82	56	59	37	15	2	2
Mean or Average Score,.		36.1	36.5	39.0	42.6	47.5	50.5	51.8	54.4	59.5	67.5	70.2	67.5	65.0	75.5

Thorndike-McCall Reading Scale.

THE QUALITY OF HANDWRITING

In the Hackensack schools a system of handwriting has been used as a basis for instruction in this field which lays stress, at the beginning, upon the hand movement of the child rather than upon the quality of handwriting itself. That this system of instruction operates in this manner is quite clear from Table VI, which gives the scores allotted to the handwriting of the Hackensack children.

In order to measure the handwriting in Hackensack, the handwriting of the compositions which the children were asked to write was used. One thousand five hundred and sixty-eight compositions were scored for the quality of the handwriting employed. When preparing for the composition test the children were told that their handwriting would also be scaled. In other words, it is clear that the handwriting that was being measured was that which children wished to have considered as their best effort when doing composition work.

The Thorndike Handwriting Scale was utilized in scoring. The steps in this scale run from Score 4 to Score 18. In scoring each handwriting sample, three judgments were taken by comparing such sample directly with the samples on the handwriting scale. The median of the three judgments was used as the final score allotted to each sample. The quality of the handwriting alone was judged. From this method speed itself could not be determined. There was no time limit placed upon the writing and children were not writing the same sentences. The scores show a very satisfactory growth from the 4th Grade through the senior grade of the high school. The handwriting in the 3d Grade is rated higher than that of the 4th and 5th, largely because the children of the 3d Grade have not yet lost their ability to form letters because of their desire to acquire a movement which will increase their speed as well as quality.

In grades below the 7th, Hackensack is lower than other cities in which this same scale has been applied. It is possible to compare Hackensack with Paterson, Newark, Chatham, Nassau County, Baltimore and Des Moines, as has been done in Table VII. Grade 7 and 8 (Hackensack) are rated higher than Grade 7 and 8 of four other of these school systems, but lower than two others.

TABLE VI

DISTRIBUTION OF HANDWRITING SCORES BY GRADES, HACKENSACK, NEW JERSEY
JUNE, 1921

(Thorndike Handwriting Scale)

SCORES	ELEMENTARY GRADES						HIGH SCHOOL				
	3	4	5	6	7	8	I	II	III	IV	Total
5,	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1
6,	7	17	21	1	.....	.....	.....	.....	.....	.....	46
7,	24	64	52	11	.....	1	.....	.....	.....	.....	152
8,	65	80	58	43	3	3	.....	.....	2	.....	254
9,	32	37	44	53	26	10	1	2	7	5	217
10,	5	3	17	27	15	5	9	2	8	7	98
11,	1	.....	4	14	25	34	43	22	16	14	173
12,	.....	.....	.....	10	40	24	79	37	22	27	239
13,	.....	.....	1	3	25	32	52	64	12	24	213
14,	.....	.....	.....	.....	19	14	31	28	11	22	125
15,	.....	.....	.....	.....	5	1	6	7	.....	7	26
16,	.....	.....	.....	.....	1	10	3	4	.....	4	22
17,	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2
Total Number, ...	134	202	197	162	159	134	224	166	78	112	1.568
Median, ...	8.1	7.7	7.9	9.0	11.8	12.1	12.3	12.8	11.8	12.6	10.6

TABLE VII

HANDWRITING SCORES
COMPARISON BY GRADES WITH OTHER CITIES

(Thorndike Handwriting Scale)

CITY	ELEMENTARY GRADES						HIGH SCHOOL			
	3	4	5	6	7	8	I	II	III	IV
Hackensack, N. J., ...	8.1	7.7	7.9	9.0	11.8	12.1	12.3	12.8	11.8	12.6
Paterson, N. J.,*	.....	9.1	10.7	11.1	10.4	10.9	.....	.....	.....	.....
Newark, N. J.,*	.....	9.9	11.5	11.9	12.2	13.2	.....	.....	.....	.....
Chatham, N. J.,*	.....	9.3	10.3	11.7	12.8	13.3	.....	.....	.....	.....
Nassau County, N. Y.,*	.....	9.0	10.0	10.5	11.0	11.0	.....	.....	.....	.....
Baltimore, Md.,†	.....	8.5	9.3	9.7	10.6	10.6	.....	.....	.....	.....
Des Moines, Ia.,†	.....	8.1	8.4	8.9	9.5	10.0	.....	.....	.....	.....

* See Paterson, N. J., Survey, Bureau of Publications, Teachers College, Columbia University, N. Y. C.
† See Baltimore, Md., Survey, Board of School Commissioners, Baltimore, Md.

When compared with the standard scores which have been set up by Starch, Hackensack is shown to be low in Grades 4, 5 and 6, but to be high in Grades 7 and 8. Starch's figures result from administration of this scale to the handwriting of about 4,000 pupils in eight cities at the end of the school year.

	GRADES					
	3	4	5	6	7	8
Hackensack, June, 1921, ...	8.1	7.7	7.9	9.	11.8	12.1
Starch's Standard at the end of school year on Thorndike Handwriting Scale, ...	8.2	8.7	9.3	9.8	10.4	10.9

This increase in quality of handwriting in the 7th and 8th Grades may be considered a defense for the system that is being used. However, studies should constantly be made in Hackensack to discover whether too much time is being spent in the lower grades in order to secure the results indicated above. It may become clear from an extensive investigation in this field that less time spent in handwriting will produce equivalent results, or that a concentration of effort in the lower grades will produce better results earlier than are now secured.

Chart III represents graphically some of the data of Table VII, indicating that handwriting presents a problem for considerable study on the part of the teaching staff.

In Table VIII may be found the age distribution of handwriting scores. At ages 7 and 18 and above are too few cases to be significant. The progress is constant from age 8 to age 14, although not uniform. The drop at age 15 is difficult to explain. Chart IV represents the age distribution.

TABLE VIII

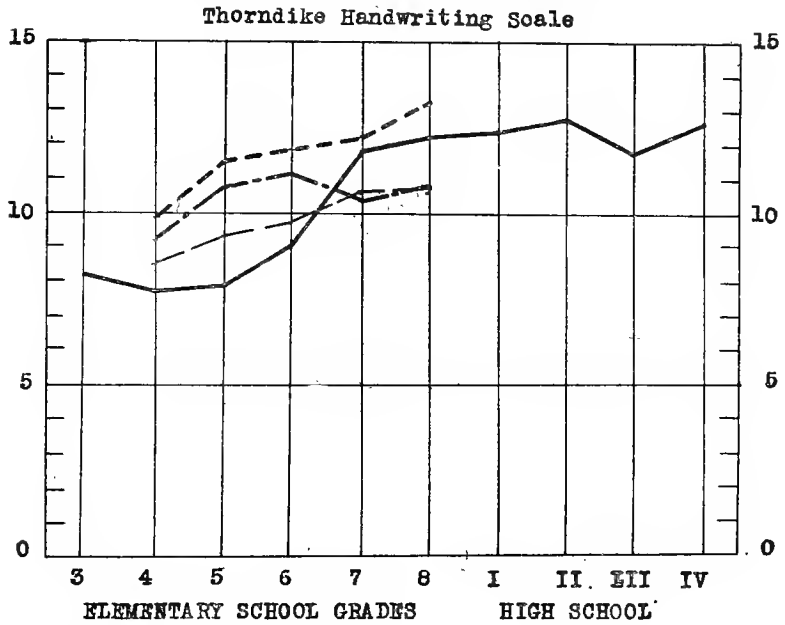
DISTRIBUTION OF HANDWRITING BY AGES

HACKENSACK PUBLIC SCHOOLS, JUNE 7TH, 1921

SCORE	AGE														
	7	8	9	10	11	12	13	14	15	16	17	18	19	20	TOTAL
5, ...	....	....	1	1	....	....	.....	.....	....	....	....	.....	....	....	2
6, ...	1	3	1	3	3	....	.....	.....	....	....	....	.....	....	....	11
7, ...	....	12	7	13	7	6	1	3	1	....	....	.....	....	....	50
8, ...	5	24	26	11	15	15	10	.....	....	1	....	.....	....	....	107
9, ...	2	12	13	15	22	20	22	7	3	4	7	1	....	....	128
10, ...	1	2	4	1	15	11	7	3	8	5	7	1	1	....	66
11, ...	....	1	....	1	4	12	16	22	33	15	13	5	....	1	123
12, ...	....	....	....	1	5	24	23	33	47	37	18	9	1	....	198
13, ...	....	....	....	3	4	12	26	52	43	42	17	7	....	....	206
14, ...	....	....	....	1	3	9	13	29	21	21	14	5	....	....	116
15, ...	....	....	....	....	2	3	1	4	5	3	2	3	....	....	23
16, ...	....	....	....	....	....	2	1	7	3	2	1	1	1	....	18
17, ...	....	....	....	....	....	....	.....	.....	....	....	1	1	....	....	2
Total, ...	9	54	52	50	80	114	120	160	164	130	80	33	3	1	1,050
Median, ...	8.2	8.	8.1	8.2	9.2	10.9	11.66	12.7	12.3	13.2	12.2	12.57	....	....	11.69

CHART No. 3

COMPARISON OF HACKENSACK MEDIAN SCORES IN HANDWRITING WITH OTHER CITIES—JUNE, 1921



Legend:

Hackensack ————

Newark, N. J. - - -

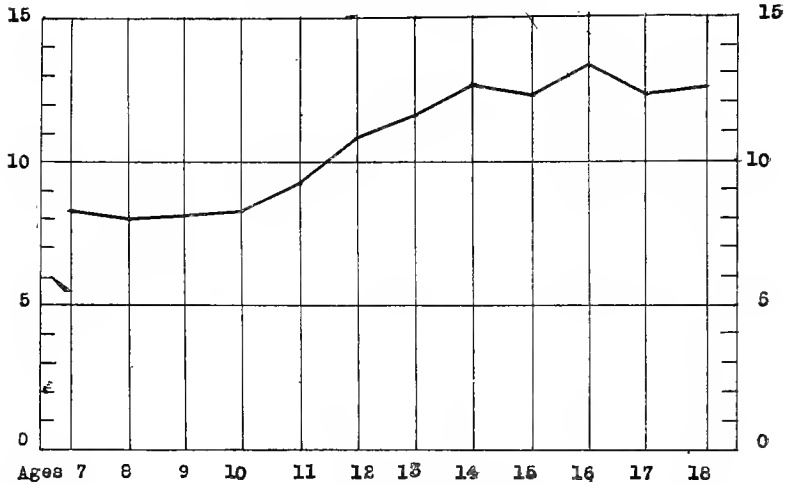
Paterson, N. J. ——-——

Baltimore —— ——

CHART No. 4

DISTRIBUTION OF HANDWRITING BY AGES IN HACKENSACK—JUNE, 1921

Thorndike Handwriting Scale



THE MEASUREMENT OF ENGLISH COMPOSITION

In order to secure English compositions the quality of which could be measured, the children in the elementary schools were asked to write for twenty minutes on the topic, "What I should Like to do Next Saturday." The high school students were given the theme, "My Most Exciting Experience," for the purpose of writing their compositions. All the children of all the grades from the third to the high school wrote compositions. On the basis of representative sampling random samples of each grade in each school were collected. Eight hundred thirty-six samples of compositions were finally selected for evaluation, and the number of compositions from each grade was that proportion of the total number of compositions selected as the total number of children in the grade was to the total number of children who wrote compositions.

In judging the compositions selected for rating, an English composition scale called the Nassau County Supplement to the

Hillegas Scale was used. This measuring device consists of a series of compositions of increasing difficulty whose relative values have been scientifically determined. The zero composition on this scale is the following:

0. .004	What I should like to do next Saturday I went going on to the Dox Saturdaye dnd day we the boys and I well going home and I well going the boys. and I will going these read in and they to night. and we or night. I well going a ground shalt and I gone out I will going to shea shouse and I will shoe or the skill of the shea of night.

A composition midway on the scale, namely, that one rating at 3.8 is the following:

3.8 3.84	I would like to go out in the after noon and play catching the ball. Go over to Bertha's house and have a few girls to come with me and be on each others side. I have a tennis ball to play with. The game is that one person should stand quite aways from another person and throw the ball too one then another. Someone has to be in the middle and try too get the ball a way from someone then she takes this persons place who she caught the ball from. Then till every person has a chance.

The composition on this scale which is given the highest rating, namely, 9.0 is as follows:

9.0	The courage of the panting fugitive was not gone; she was game to the tip of her high-bred ears; but the fearful pace at which she had just been going told on her. Her legs trembled, and her heart beat like a trip-hammer. She slowed her speed perforce, but still fled industriously up the right bank of the stream. When she had gone a couple of miles and the dogs were evidently gaining again, she crossed the broad, deep brook, climbed the steep left bank, and fled on in the direction of the Mt. Marcy trail. The fording of the river threw the hounds off for a time; she knew by their uncertain yelping, up and down the opposite bank, that she had a little respite; she used it, however, to push on until the baying was faint in her ears, and then she dropped exhausted upon the ground.

To determine the merit of a composition three judges compared it independently with the specimens on the scale, and assigned it the value of that scale sample which it most closely resembled. The final rating given any one of the 836 compositions was the median of the three judgments thus rendered by the judges. It is recognized that the evaluation of written composition is rendered difficult by the fact that judgment is influenced by both form and content. As far as possible, judges were asked to ignore form and to consider content of the compositions written. In other words, the writing and spelling were, as far as possible, eliminated as factors in the determination of the quality of the written compositions.

A composition from those selected in Hackensack, which was rated at zero by the judges, is the one shown below. This was written by a Third Grade "B" pupil, eight and one-half years of age, in the Fairmount School.

"What should like to do next saturday work plow plow basaboll barfooted race tall storns have a catecat plow on a suing"

A composition which was considered as rating at 3.8 by the judges is also given here. This composition was written by a Fifth Grade "B" pupil of the Union Street School.

"I should like to do work carry coals for my mother and go to store, and go playing. I will mine my brother and clean my shoes and get ready for Sunday. I will clean my mother's shoes too. I will clean my yard and sweep the sidewalk. I will go to the movies and I will wash for mother. I will have a good time because I like to work. I will go down the park, I will go up mainestreet to buy my hariribbon, and my sister's stockeing.

I will go to pick some flowers and some cherries. After I am through picking some flowers and some cherries I will have some games, races, hide and go seek and play ball. After that I will have dinner when I am through I will go out and play again then I will call my friends to come and play with me we will play jumping roup and all kinds of games. I will play with my dolls and dishes I will have a party with all my friends when it is around five o'clock I will go home and have supper after supper I will clean my dishes and sweep the floor when I am finisher I will go out and go play again one of my friends will dance with my sister after danceing we will play races, and jumping."

Some of the best compositions were naturally written by seniors in the high school, and one of the compositions which is rated highest among all of those given is shown below. This composition was written by a senior sixteen years of age and rated at 8.0.

"My Most Exciting Experience."

"One hot day last August I lay, swinging in the hammock on the front porch of our summer cottage. The sunshine was warm and the drone of the honeybees mixed with the distant buzz of the sawmill made me feel very drowsy. Ostensibly I was trying to compose the first sentence of a letter to my best chum. But that was only an excuse for not weeding the garden, as I knew I ought to be doing. I was just dozing off when I heard Uncle Billy coming up the brick path. The whole neighborhood knows when "Unc' Billy" is approaching for he has a wooden leg and knows how to use it. Ordinarily I would have "played 'possum" just to tease him; but I was so astonished to hear the stump—stump actually at a running pace—Unc' never runs unless he has to—"that I sprang to the steps to see what was the matter."

"Oh Miss Betty—chile! Li'l Jackie Parker done let his brudder's canoe run 'way wif him! He's down dar by de rapids now an' a-gettin' nearah an' nearah de falls ev'y minute. Caint yo-all do somfin'?"

I stood for a moment petrified then rushed past the old fellow where he stood and tore down the short, steep, grassy bank, taking a flying leap onto the dock. Thank heavens, I didn't have on high French heels! I knew what I had to do. Mr. Mills, our neighbor, owned a high-power gasoline racing motor-boat, I had often run it, but there was no time to stop and ask for permission.

I cast loose the painter and was turning the heavy fly-wheel before I realized the risks to myself, and the boat. The clear, dark-brown water glided past with little gurgles and chortles. Just around the bend lay the rapids—and Jackie nearing the falls. Would the engine never start? At last to my relief it gave a gasp and then with a great report started its rapid propellors."

Table IX shows the distribution of the scores and the median accomplishment of each section of the various grades from which compositions were used. There is a very steady progress made from the beginning of the school system to the fourth year in

the high school. In some instances the difference between one section of a grade and the section directly following it is very slight. This may be due to the fault of selection, or it may be due to the fact that steps on the scale are too crude to measure the actual progress made between those two grades. It is rather surprising to find the eighth "A" grade scoring less than the eighth "B", and the seventh "A" less than the seventh "B". The progress in the high school is clearly evident, the steps for the four years being successively 6.0, 6.8, 7.0, and 7.3.

When the scores for the grades are consolidated and the grade sections are ignored, the progress from the third grade through the eighth is more clearly evident than it is when the scores for the grade sections are indicated. As shown in Table X the progress made from the third grade through the eighth is through the steps 1.6, 2.7, 3.2, 4.0, 4.4, and 5.4. The biggest difference seems to occur between grades seven and eight.

In order to determine whether this progress is what might be anticipated, it is wise to compare with other school systems where ratings have been given on this same English composition scale. In Table XI, Hackensack is compared with four other school systems in New Jersey with respect to its achievements in English composition in the elementary school and with three other school systems in New Jersey with respect to English composition in the high school. In grades four, five, six, seven, and eight Hackensack ranks second of the five school systems, the difference between the first and second place being negligible. In the high school Hackensack's ratings are considerably above the results that have been secured in the other three situations shown in the table. It seems that the high school achievement is distinctly excellent.

It becomes quite clear from the results that have been secured in this measurement of English composition that Hackensack is doing better than many other school systems in English composition in the elementary grades, and is doing a superior work in the high school in this field.

Chart 5 shows graphically the comparative results secured in these school systems in the measurement of English composition.

TABLE IX

DISTRIBUTION OF SCORES OF HACKENSACK, NEW JERSEY, ELEMENTARY SCHOOLS (GRADES 3 TO 12) IN ENGLISH COMPOSITION, SCORED BY THE NASSAU COUNTY SUPPLEMENT TO THE HILLEGAS SCALE JUNE, 1921

(Scored by Sections)

Scores	GRADE		GRADE		GRADE		GRADE		GRADE		GRADE		HIGH SCHOOL			
	3B	3A	4B	4A	5B	5A	6B	6A	7B	7A	8B	8A	I	II	III	IV
0,	8	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1.1,	24	12	3	2	1	...	...	...	...	...	...	...	...	...	...	...
1.9,	21	23	20	11	9	2	...	...	1	1	...	...	...	...	...	...
2.8,	1	8	21	26	26	20	14	4	1	8	...	...	...	...	...	...
3.8,	....	3	6	16	13	25	41	23	18	22	1	8	2	...	...	...
5.0,	....	...	...	1	1	6	13	14	23	17	19	23	11	...	2	...
6.0,	....	...	...	...	...	...	1	8	7	2	20	13	34	21	13	6
7.2,	....	...	...	...	...	...	...	1	...	...	6	3	6	26	29	34
8.0,	....	...	...	...	...	...	...	...	...	...	...	...	1	3	6	18
9.0,	....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3
Total number, ...	54	46	50	56	50	53	69	50	50	50	46	47	54	50	50	61
Medians, ...	1.3	1.9	2.4	2.9	2.9	3.5	3.8	4.3	4.6	4.1	5.7	5.1	6.0	6.8	7.0	7.3

TABLE X

DISTRIBUTION OF SCORES OF HACKENSACK, NEW JERSEY, ELEMENTARY SCHOOLS (GRADES 3 TO 9) IN ENGLISH COMPOSITION, SCORED BY THE NASSAU COUNTY SUPPLEMENT TO THE HILLEGAS SCALE, JUNE, 1921

SCORES	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8
0,	8	.....	.....	.....	.....	....
1.1,	36	5	1	.....	.....	....
1.9,	44	31	11	.....	2	....
2.8,	9	47	46	18	9	....
3.8,	3	22	38	64	40	9
5.0,	.....	1	7	27	40	42
6.0,	.....	.....	.....	9	9	33
7.2,	.....	.....	.....	1	.....	9
8.0,	.....	.....	.....	.....	.....	....
9.0,	.....	.....	.....	.....	.....	....
Total number, ...	100	106	103	119	100	93
Median, ...	1.6	2.7	3.2	4.0	4.4	5.4

TABLE XI

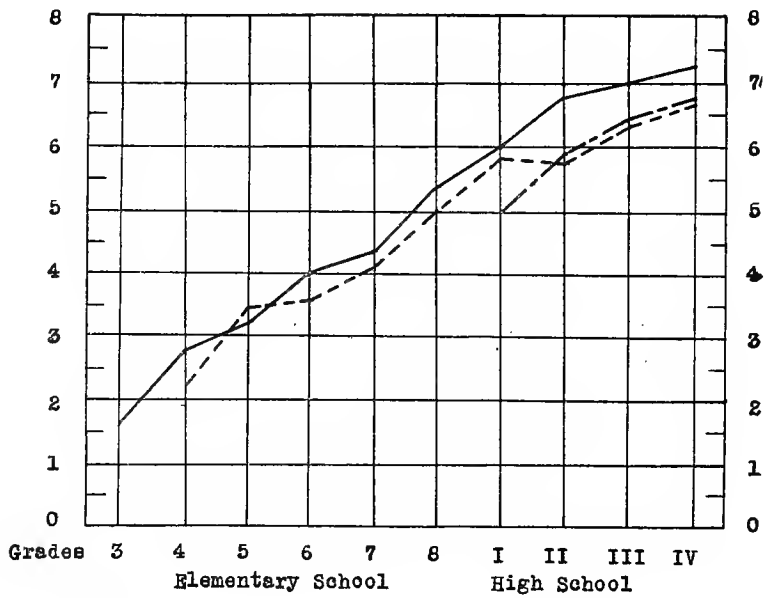
COMPARISON OF HACKENSACK ELEMENTARY SCHOOLS WITH SCHOOLS IN OTHER CITIES IN ENGLISH COMPOSITION—SCORED BY THE NASSAU COUNTY SUPPLEMENT TO THE HILLEGAS SCALE

CITY	ELEMENTARY SCHOOLS						HIGH SCHOOL			
	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade I	Grade II	Grade III	Grade IV
Hackensack, Section B, ...	1.3	2.4	2.9	3.8	4.6	5.7	.....	.....	.....	.....
Hackensack, Section A, ...	1.9	2.9	3.5	4.3	4.1	5.1	.....	.....	.....	.....
Hackensack, Total, ...	1.6	2.7	3.2	4.0	4.4	5.4	6.0	6.8	7.0	7.3
South River, N. J., ...	.....	2.3	2.6	3.8	4.8	5.6	5.2	5.0	5.9	6.3
Chatham, N. J., ...	.....	2.9	2.9	4.1	4.0	5.3	.....	.....	.....	.....
Newark, N. J., ...	.....	2.4	2.5	3.6	4.3	5.3	.....	.....	.....	.....
Paterson, N. J., ...	.....	2.2	3.4	3.5	4.1	5.0	5.8	5.7	6.3	6.6
54 High Schools in 35 States,	.....	.....	.....	.....	.....	.....	5.0	5.9	6.4	6.7

CHART No. 5

COMPARISON OF HACKENSACK MEDIAN SCORES WITH OTHER CITIES IN ENGLISH COMPOSITION—JUNE, 1921

(Scored by Nassau Supplement to Hillegas Scale)



SPELLING

For the purpose of testing the spelling ability of the children in Hackensack, two lists of words were used, as shown below. These lists were selected from the Buckingham Extension of the Ayres Spelling Scale. Each word in one of these lists is spelled with less difficulty than the word next succeeding it. The two lists are of approximate equality with respect to spelling difficulty, and, therefore, were used interchangeably and the scores listed in the same tables. The first word in each list was chosen from column H of the Buckingham Extension, the second from column I, the third from column J, and so on until the last word in each list was from column AF. If future comparisons are desired in Hackensack from these scores, the results used here may be compared with the results obtained, even though an entirely different selection of test words is made, providing the words are selected in the manner indicated above.

The first list given below was utilized in the morning and given in the majority of classrooms. The second was utilized in the afternoon or in case there was reason to believe that the children had discovered from their mates what test was being given.

First List

1. yes
2. song
3. forget
4. water
5. lesson
6. railroad
7. yesterday
8. liberty
9. entrance
10. property
11. visitor
12. examination
13. political
14. receive
15. secretary
16. athletic
17. committee
18. restaurant
19. cemetery
20. kerosene
21. guarantee
22. cantaloupe
23. souvenir
24. rhinoceros
25. conscientious

Second List

1. box
2. tree
3. girl
4. clean
5. world
6. contract
7. bridge
8. company
9. beautiful
10. relative
11. prepare
12. investigate
13. conference
14. agreement
15. experience
16. practical
17. annual
18. orchestra
19. enthusiasm
20. apologize
21. pneumonia
22. syndicate
23. chauffeur
24. inflammable
25. dissension

In giving the test, each word was pronounced twice and the words were pronounced by the teacher to whose voice the children were accustomed. It was not expected that the test would present as little difficulty to the lower grades as to the high school, but since the words are graded in difficulty, the scale may be considered a good measure for determining the relative abilities of various grade groups.

In all, 3,763 children were tested; from grade 2B through the fourth year of the high school. In other words, practically all of the children in the schools on June 6th, 1921, were given this test.

In Table XII are given the results of the test in Hackensack as compared with the results secured from Baltimore and the average of other schools. The Baltimore scores were secured in December, 1920. The other scores were made later in the school year. In the fifth grade and above Hackensack compares very favorably with the results from these other cities in spelling ability, as measured by this test. The results secured in the fourth grade are not as good as one might expect, as measured by the results obtained from other cities.

TABLE XII

COMPARISON BY GRADES OF SPELLING SCORES IN HACKENSACK AND ELSEWHERE
(Selected List, Columns H to AF, Buckingham-Ayres)
JUNE 6TH, 1921

Grade	*IV*	*V*	*VI*	*VII*	*VIII*
Average, Other Schools, ...	10.5	12.5	14.5	16.4	18.3
Median, Baltimore, White, ... (Dec., 1920)	9.7	12.6	15.2	17.1	18.5
Median, Baltimore, Colored, ... (Dec., 1920)	7.2	10.6	11.3	13.2	16.7
Median, Hackensack, ... (June, 1921)	9.2	12.5	14.9	17.4	19.3

NOTE: Scores represent number of words correctly spelled from list of twenty-five.

In Table XIII the scores secured from this spelling test have been given for each school and for each grade of each school. There are no very marked differences found in the achievements of grades in the individual schools if we except Grade 6A. In other words, it is clear that spelling is being

taught uniformly throughout the school system. If further stress is needed to be placed upon spelling, it seems that it should be placed upon the spelling of the grades below the sixth, rather than the grades above the sixth.

This test was not originally intended as a test for high school students, but was so used in Hackensack. The results indicate that a very large proportion of children in the high school spell well; the median error for the Senior class being 2.6 words; for the Junior class, 4.7 words; for the Sophomore class, 4.5 words; for the Freshman class, 5.3 words. Slightly greater emphasis upon spelling in the high school would, no doubt, very perceptibly reduce the average number of errors for the high school students.

TABLE XIII

GRADE AND SCHOOL SUMMARY OF SPELLING SCORES

MEDIAN NUMBER OF CORRECTLY SPELLED WORDS FROM A LIST OF TWENTY-FIVE WORDS SELECTED FROM BUCKINGHAM EXTENSION OF AYRES SPELLING SCALE HACKENSACK, N. J., JUNE 6TH, 1921

SCHOOL	GRADE 2		GRADE 3		GRADE 4		GRADE 5		GRADE 6		GRADE 7		GRADE 8	
	B	A	B	A	B	A	B	A	B	A	B	A	B	A
Number 1, ...	3.6	....	4.4	7.	8.4	9.25	10.3	15.1	....	....	....	....	....	....
Number 2, ...	2.1	3.3	5.	6.84	8.5	11.	11.	13.5	13.4	14.4	....	....	....	....
Number 3, ...	....	....	.....	.....	8.	9.4	12.8	13.2	14.8	16.8	16.8	18.1	19.4	19.2
Number 4, ...	....	....	6.43	7.5	9.3	10.5	10.84	13.86	14.	17.3	....	....	....	....
Number 5, ...	....	....	6.5	7.	....	.....	.....	.....	....	....	....	....	....	....

	I	II	III	IV
HIGH SCHOOL	20.7	21.5	21.3	23.4

AGE DISTRIBUTION OF SPELLING ABILITY

Again, the most satisfactory comparison of spelling achievements is on an age basis. How well do Hackensack pupils spell, as compared with the pupils of other school systems of the same age? Unfortunately, age comparisons are not as easily obtained as grade comparisons. In Table XIV the age data are given for the Baltimore Elementary Schools, the Hackensack Elementary Schools, for the Hackensack High School and for

the Hackensack Elementary and High School combined. It is clearly seen that, beginning with the tenth year of age, Hackensack pupils spell very much better than the pupils of Baltimore. It is difficult to explain the lower score of the nine-year-olds, since, as a rule, the younger children in any grade do better school work. The low scores for the seven and eight-year-olds may be due to the small number of cases available.

TABLE XIV

COMPARISONS BY AGES OF SPELLING SCORES, HACKENSACK AND BALTIMORE

SCHOOLS	AGE											
	7	8	9	10	11	12	13	14	15	16	17	18
Baltimore Elementary, ...	....	11.1	10.6	11.7	13.4	14.7	16.0	16.9	16.6	17.3	16.5	....
Hackensack Elementary, ..	7.16	7.5	9.75	12.4	15.2	16.2	17.8	18.3	18.8	19.	19.3	....
Hackensack High, ...	....	....	....	....	....	....	21.3	21.1	20.5	21.6	22.3	22.4
Hackensack Elementary and High, ...	7.16	7.5	9.75	12.4	15.2	16.4	18.3	20.3	20.3	21.1	22.2	....

In the appendix are given the complete distributions by ages of all children who were tested in spelling. It will be noticed that the children in the high school spell much better than the children of the same age in the elementary schools. In other words, Hackensack's tendency has been to send its more capable pupils ahead much more rapidly than other pupils of the same age. There is much to be commended about this, providing the other children are not too greatly retarded. The facts regarding retardation are brought out in other parts of this report.

Chart VI shows the steady progress made in spelling as children grow older. The curve of this chart is a most satisfactory one. In Chart VII will be found the curve of grade achievement in Hackensack which is compared with the curve of achievement in Baltimore and with the curve of grade standards.

CHART No. 6

DISTRIBUTION OF HACKENSACK SCORES IN SPELLING BY AGES

25 Selected Words—Columns H-F—Buckingham-Ayres

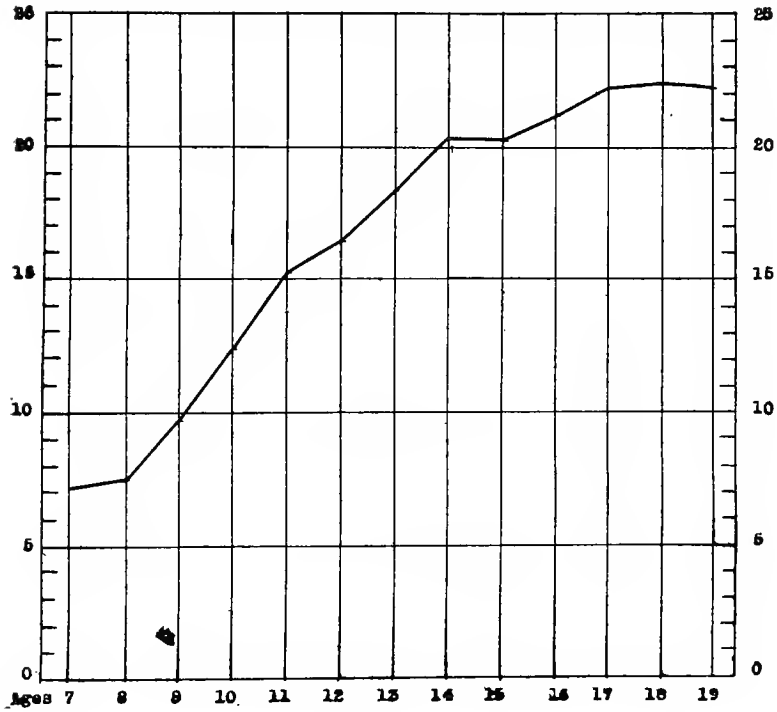
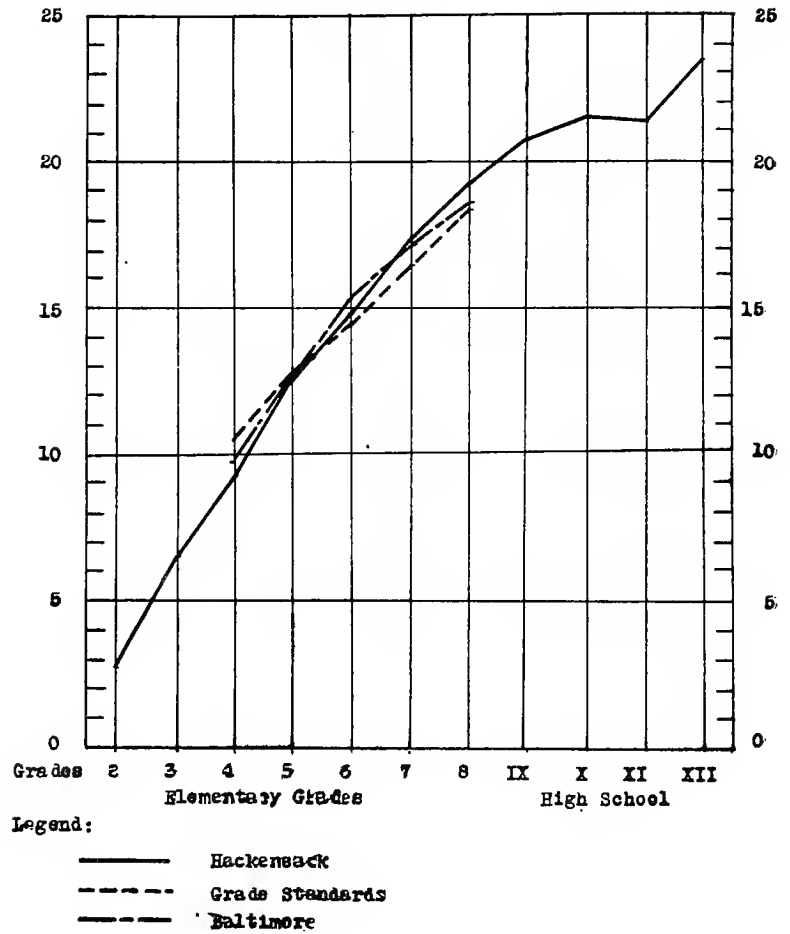


CHART No. 7

COMPARISON OF HACKENSACK ACHIEVEMENTS IN SPELLING BY GRADES WITH BALTIMORE AND STANDARDS—1921

Selected list—25 words—Columns H-F—Buckingham-Ayres



ARITHMETIC TESTS

(*Woody Test—Series B*)

In order to test the achievements of the Hackensack children in Arithmetic three different tests were utilized, namely, Woody

Test in the Four Fundamentals, Series B, the Courtis Test in the Four Fundamentals, Series B, and The Stone Reasoning Test.

The Woody Tests were applied to the children as follows:

	GRADES						
	3rd	4th	5th	6th	7th	8th	Total
Addition, ...	248	256	246	202	180	163	1295
Subtraction, ...	248	256	245	202	181	163	1295
Multiplication, ...	248	256	246	202	181	162	1295
Division, ...	248	257	246	197	181	163	1292

Without doubt, the achievements of these children indicate fully what all the children of the same grades can do in Hackensack. Tables J, K, L and M of Appendix I give the scores by schools and grades for each one of the four fundamentals. In no case is the variation between schools in any one fundamental so marked as to be outstanding. It seems clear, from the median achievements of the various classes, that no one class or school is lagging behind in the field of Arithmetic. There are some instances of classes that are behind in one fundamental and in advance of other classes in other fundamentals. In other words, the tables may be utilized by the teachers of the various schools for the purpose of determining whether their stress in instruction has been too great upon one phase of Arithmetic rather than upon another.

In Tables XV, XVI, XVII and XVIII the distribution of the results obtained in the Woody Arithmetic Tests is given by grades and the number of problems correctly solved. It will be seen that in addition very satisfactory progress has been made from the third grade through the eighth. It is strange to find grade 6B ranking higher than grade 6A and even higher than grade 7B, but the difference in attainment is so slight as not to be particularly disconcerting. In subtraction it also holds that the 6B group is above the 6A group and equal to the 7B group. It also is shown by these tests that the 8B group is slightly

superior to the 8A group in subtraction. The steady growth from grade to grade is, however, maintained in subtraction, although it is not as evident in the subdivisions of each grade. In multiplication the discrepancy in progress seems to come where the 7A classes are rated lower than the 7B classes. In division there are similar discrepancies which, however, are only slight. In both multiplication and division the progress from grade to grade is very satisfactory.

In Tables XIX, XX, XXI and XXII Hackensack's arithmetic scores are compared with six other cities which also have used Series B of the Woody Test. The comparisons in addition in Table XIX go to show that Hackensack is doing very superior work in all grades, as measured by what other cities are doing, as well as measured by the Woody standards. In subtraction Hackensack ranks far ahead of the Woody standards in all grades except the eighth, where the children have been rated slightly lower than the standards. In subtraction Hackensack also holds a high place among this group of six cities which may be considered representative cities of the United States, since they are located in all sections and are of varying sizes. In multiplication Hackensack's grades, with the exception of the seventh and eighth, have been rated on this test above the Woody standards and also have achieved better results than similar grades in the majority of the six cities. In the seventh and eighth grades Hackensack has not quite reached the Woody standards, but has done work superior to all other cities, with the exception of Pittsburgh, in both of these grades. In division all grades except the seventh and eighth again rank above the Woody standards, while the seventh and eighth grades do not reach these standards, but, apparently, are as successful in reaching these standards as the majority of the other cities.

TABLE XV

DISTRIBUTION BY GRADES AND SCORES

(Woody Addition Tests—Series B)

Hackensack, N. J.—June, 1921

GRADE	NUMBER OF PROBLEMS CORRECTLY SOLVED																			Total	Median
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
3B, ...	0	1	0	3	3	8	9	16	15	19	9	15	5	1	0	...	...	...	...	104	9.8
3A, ...	0	0	1	0	1	7	7	16	17	29	25	14	21	3	3	...	...	...	...	144	10.8
	0	1	1	3	4	15	16	32	32	48	34	29	26	4	3	...	...	...	...	248	10.4
4B, ...	..	..	..	..	1	0	1	4	10	12	22	24	26	9	2	...	...	...	...	111	12.2
4A, ...	..	..	..	..	0	2	0	3	5	8	22	32	42	19	12	...	...	...	...	145	13.0
	..	..	..	..	1	2	1	7	15	20	44	56	68	28	14	...	...	...	...	256	12.6
5B, ...	..	..	..	..	..	..	..	1	0	2	9	11	19	32	28	12	3	0	1	118	14.5
5A, ...	..	..	..	..	..	..	..	1	0	2	3	14	16	25	26	27	14	0	0	128	15.1
	..	..	..	..	..	..	..	2	0	4	12	25	35	57	54	39	17	0	1	246	14.8
6B, ...	..	..	..	..	..	..	..	..	1	0	0	3	5	12	25	32	21	13	3	115	16.4
6A, ...	..	..	..	..	..	..	..	..	0	1	2	4	7	5	21	21	14	8	4	87	16.2
	..	..	..	..	..	..	..	..	1	1	2	7	12	17	46	53	35	21	7	202	16.3
7B, ...	..	..	..	..	..	..	..	..	..	0	0	1	8	16	14	18	23	6	6	92	16.3
7A, ...	..	..	..	..	..	..	..	..	..	1	0	2	6	6	17	23	20	6	7	88	16.5
	..	..	..	..	..	..	..	..	..	1	0	3	14	22	31	41	43	12	13	180	16.4
8B, ...	..	..	..	..	..	..	..	..	..	..	..	1	5	4	14	21	19	16	7	87	16.9
8A, ...	..	..	..	..	..	..	..	..	..	..	..	0	3	6	9	16	24	12	6	76	17.2
	..	..	..	..	..	..	..	..	..	..	..	1	8	10	23	37	43	28	13	163	17.1
Total, ...	0	1	1	3	5	17	17	41	48	74	92	121	163	138	171	170	138	61	34	1295	....

TABLE XVI

DISTRIBUTION BY GRADES AND SCORES

(Woody Subtraction Tests—Series B)

Hackensack, N. J.—June, 1921

GRADE	NUMBER OF PROBLEMS CORRECTLY SOLVED																Total	Median
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
3B,	1	1	2	1	5	7	30	21	26	9	1	...	...	...	...	...	104	7.2
3A,	2	1	1	3	1	8	22	37	40	29	0	...	...	...	...	...	144	7.9
	3	2	3	4	6	15	52	58	66	38	1	...	...	...	...	...	248	7.7
4B,	2	...	...	1	1	2	9	19	41	29	6	...	...	...	...	...	110	8.5
4A,	2	...	...	0	0	0	8	15	56	56	9	...	...	...	...	...	146	8.8
	4	...	...	1	1	2	17	34	97	85	15	...	...	...	...	...	256	8.8
5B,	....	...	...	...	...	...	1	1	13	23	33	27	13	5	2	0	118	10.6
5A,	....	...	...	...	...	...	0	0	11	7	19	33	26	24	4	3	127	11.8
	....	...	...	...	...	...	1	1	24	30	52	60	39	29	6	3	245	11.2
6B,	....	...	...	...	0	...	...	...	...	0	15	14	25	32	27	2	115	13.1
6A,	....	...	...	...	1	...	...	...	...	5	1	20	22	16	17	5	87	12.8
	....	...	...	...	1	...	...	...	...	5	16	34	47	48	44	7	202	12.9
7B,	....	...	...	...	...	...	...	...	1	0	4	10	28	25	21	4	93	13.1
7A,	....	...	...	...	...	...	...	...	0	0	5	9	10	24	26	14	88	13.8
	....	...	...	...	...	...	...	...	1	0	9	19	38	49	47	18	181	13.5
8B,	....	...	...	...	...	...	...	...	0	...	2	7	10	17	30	21	87	14.3
8A,	....	...	...	...	...	...	...	...	1	...	2	8	10	19	17	19	76	13.9
	....	...	...	...	...	...	...	...	1	...	4	15	20	36	47	40	163	14.1
Total, ...	7	2	3	5	8	17	70	93	189	158	97	128	144	162	144	68	1295	....

TABLE XVII

DISTRIBUTION BY GRADES AND SCORES

(Woody Multiplication Tests—Series B)

Hackensack, N. J.—June, 1921

GRADE	NUMBER OF PROBLEMS CORRECTLY SOLVED																					Total	Median
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
3B, ...	4	1	8	18	21	29	18	2	3	0	0	0	..	..	..	...	...	...	..	..	..	104	5.0
3A, ...	3	1	2	6	15	14	21	15	24	24	11	8	..	..	..	...	...	...	..	..	..	144	7.6
	7	2	10	24	36	43	39	17	27	24	11	8	..	..	..	...	...	...	..	..	..	248	6.1
4B, ...	0	0	0	1	4	8	8	10	22	19	14	20	4	1	0	...	...	...	..	..	..	111	8.0
4A, ...	0	1	1	0	1	1	5	8	21	20	33	30	20	3	1	...	...	...	..	..	..	145	10.1
	0	1	1	1	5	9	13	18	43	39	47	50	24	4	1	...	...	...	..	..	..	256	9.9
5B, ...	..	..	..	..	..	..	0	0	6	5	9	25	12	28	20	11	2	0	0	0	..	118	13.1
5A, ...	..	..	..	..	..	..	1	1	4	3	5	10	14	26	20	25	9	7	1	2	..	128	14.0
	..	..	..	..	..	..	1	1	10	8	14	35	26	54	40	36	11	7	1	2	..	246	13.5
6B, ...	..	..	..	..	..	..	..	..	..	1	2	6	4	10	14	28	18	14	12	4	3	116	15.8
6A, ...	..	..	..	..	..	..	..	..	..	0	1	4	5	9	11	14	13	14	10	3	2	86	15.9
	..	..	..	..	..	..	..	..	..	1	3	10	9	19	25	42	31	28	22	7	5	202	15.8
7B, ...	..	..	..	..	..	..	..	..	..	0	3	2	4	4	6	9	21	16	19	5	4	93	16.9
7A, ...	..	..	..	..	..	..	..	..	..	1	0	3	5	3	10	13	12	16	13	9	3	88	16.6
	..	..	..	..	..	..	..	..	..	1	3	5	9	7	16	22	33	32	32	14	7	181	16.8
8B, ...	..	..	..	..	..	..	..	..	..	..	1	1	1	5	8	11	16	17	18	7	2	87	17.0
8A, ...	..	..	..	..	..	..	..	..	..	..	0	0	1	3	7	11	10	18	13	7	5	75	17.3
	..	..	..	..	..	..	..	..	..	..	1	1	2	8	15	22	26	35	31	14	7	162	17.2
Total, ...	7	3	11	25	41	52	53	36	80	73	79	109	70	92	97	122	101	102	86	37	19	1,295	....

TABLE XVIII

DISTRIBUTION BY GRADES AND SCORES

(Woody Division Tests—Series B)

Hackensack, N. J.—June, 1921

GRADE	NUMBER OF PROBLEMS CORRECTLY SOLVED																	Total	Median
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16		
3B,	10	14	25	30	23	2	0	0	0	0	0	...	...	...	...	...	...	104	3.1
3A,	2	5	20	23	33	34	14	7	2	2	2	...	...	...	...	...	...	144	4.4
	12	19	45	53	56	36	14	7	2	2	2	...	...	...	...	...	...	248	3.9
4B,	0	5	5	8	16	25	13	22	12	4	1	0	...	...	...	...	...	111	5.9
4A,	3	0	1	5	23	20	27	21	21	15	9	1	...	...	...	...	...	146	7.2
	3	5	6	13	39	45	40	43	33	19	10	1	...	...	...	...	...	257	6.4
5B,	..	..	..	..	3	9	9	25	26	20	19	7	0	0	...	...	...	118	8.5
5A,	..	..	..	..	0	3	3	11	12	24	30	30	12	3	...	...	...	128	10.4
	..	..	..	..	3	12	12	36	38	44	49	37	12	3	...	...	...	246	9.5
6B,	..	..	..	..	..	..	1	6	8	13	27	26	21	12	2	...	...	116	11.1
6A,	..	..	..	..	..	..	2	3	6	9	18	19	14	10	0	...	...	81	11.1
	..	..	..	..	..	..	3	9	14	22	45	45	35	22	2	...	...	197	11.1
7B,	..	..	..	..	..	..	1	1	3	9	15	29	20	10	3	1	1	93	11.7
7A,	..	..	..	..	..	..	2	0	6	8	18	17	19	11	7	0	0	88	11.6
	..	..	..	..	..	..	3	1	9	17	33	46	39	21	10	1	1	181	11.6
8B,	..	..	..	..	..	..	..	..	1	8	9	18	21	19	9	2	...	87	12.4
8A,	..	..	..	..	..	..	..	..	2	6	11	16	19	17	5	0	...	76	12.2
	..	..	..	..	..	..	..	..	3	14	20	34	40	36	14	2	...	163	12.3
Total, ...	15	24	51	66	98	93	72	96	99	118	159	163	126	82	26	3	1	1292	.....

Observation of classroom work in arithmetic has shown that the children are securing from their arithmetic recitation work much more than mere facility in number work. They are learning to assume responsibility; they are being taught to consider themselves as members of social groups; they are developing responsibility and initiative, and are, in addition, thoroughly enjoying much of the work in which they are participating. It seems clear, therefore, that, combined with these results, which are difficult to measure, the results secured through the agency of the Woody Test are exceptionally satisfactory and indicate a high degree of efficiency in teaching, as well as in supervision on the part of the principals and the superintendent.

TABLE XIX

HACKENSACK ARITHMETIC SCORES COMPARED WITH SIX OTHER CITIES

Woody Tests—Series B—June, 1921

Addition

WOODY STANDARDS	9.0	11.5	14.0	15.5	16.5	17.3
	3D GRADE	4TH GRADE	5TH GRADE	6TH GRADE	7TH GRADE	8TH GRADE
Trenton,	7.9	10.3	12.1	13.9	.....	.....
Duluth (Section B),	7.4	10.7	12.6	14.9	.....	.....
" (Section A),	9.5	12.0	14.1	15.7	.....	.....
Denver (Section B),	9.3	12.9	13.0	14.1	15.8	16.0
" (Section A),	9.8	13.2	13.0	14.5	15.6	15.7
Pittsburgh,	.....	12.3	14.8	16.0	16.7	17.7
Idaho Springs,	.....	.....	12.9	12.9	14.7	15.5
Elyria,	10.0	12.8	13.6	14.5	16.0	16.0
Hackensack (Section B),	9.8	12.2	14.5	16.4	16.3	16.9
" (Section A),	10.8	13.0	15.1	16.2	16.5	17.2
Hackensack (B and A combined),	10.4	12.6	14.8	16.3	16.4	17.1

TABLE XX

HACKENSACK ARITHMETIC SCORES COMPARED WITH SIX OTHER CITIES

Woody Tests—Series B—June, 1921

Subtraction

WOODY STANDARDS	6.0	8.0	10.0	12.0	13.0	14.5
	3D GRADE	4TH GRADE	5TH GRADE	6TH GRADE	7TH GRADE	8TH GRADE
Trenton,	6.1	8.3	9.6	11.8	.....	.....
Duluth (Section B),	6.0	8.6	10.5	12.6	.....	.....
" (Section A),	6.0	9.4	11.5	13.4	.....	.....
Denver (Section B),	8.1	9.1	10.9	12.0	15.0	13.8
" (Section A),	7.0	10.0	10.6	11.0	13.5	14.5
Pittsburgh,	.....	9.4	12.0	13.2	14.1	14.9
Idaho Springs,	.....	.....	9.9	10.9	13.2	13.5
Elyria,	6.5	9.0	10.6	12.7	13.0	.....
Hackensack (Section B),	7.2	8.5	10.6	13.1	13.1	14.3
" (Section A),	7.9	8.8	11.8	12.8	13.8	13.9
Hackensack (B and A combined),	7.7	8.8	11.2	12.9	13.5	14.1

TABLE XXI

HACKENSACK ARITHMETIC SCORES COMPARED WITH SIX OTHER CITIES

Woody Tests—Series B—June, 1921

Multiplication

WOODY STANDARDS	3.5	7.0	11.0	15.0	17.0	18.0
GRADE	3D GRADE	4TH GRADE	5TH GRADE	6TH GRADE	7TH GRADE	8TH GRADE
Trenton,	.....	.....	.....	13.7	.....	.....
Duluth (Section B),	3.5	9.5	11.1	14.7	.....	.....
" (Section A),	6.3	11.0	13.8	15.8	.....	.....
Denver (Section B),	5.1	9.8	9.9	12.8	13.5	16.2
" (Section A),	6.5	10.4	10.8	13.8	16.5	15.8
Idaho Springs,	.....	.....	7.3	9.4	12.9	15.2
Pittsburgh,	.....	11.0	13.7	15.7	17.2	18.5
Elyria,	6.0	9.0	10.0	14.7	16.0	.....
Hackensack (Section B),	7.6	8.0	13.1	15.8	16.9	17.0
" (Section A),	5.0	10.1	14.0	15.9	16.6	17.3
Hackensack (B and A combined),	6.1	9.9	13.5	15.8	16.8	17.2

TABLE XXII

HACKENSACK ARITHMETIC SCORES COMPARED WITH SIX OTHER CITIES

Woody Tests—Series B—June, 1921

Division

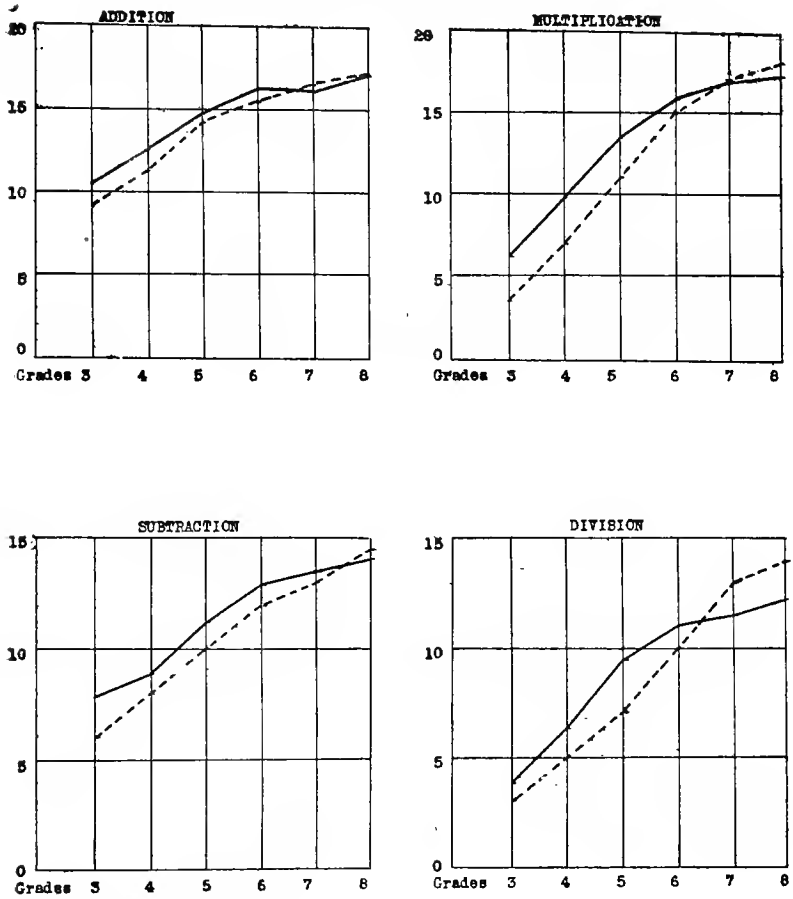
WOODY STANDARDS	3.0	5.0	7.0	10.0	13.0	14.0
GRADE	3D GRADE	4TH GRADE	5TH GRADE	6TH GRADE	7TH GRADE	8TH GRADE
Trenton,	.....	.....	.....	9.8	9.8	.....
Duluth (Section B),	3.9	6.3	8.1	10.3	.....	.....
" (Section A),	4.6	7.2	9.2	11.1	.....	.....
Denver (Section B),	4.2	6.8	7.8	9.8	10.7	11.2
" (Section A),	4.5	6.4	6.5	9.2	11.5	12.0
Idaho Springs,	.....	.....	5.9	.....	9.9	16.3
Pittsburgh,	.....	7.0	9.8	11.5	12.8	13.9
Elyria,	3.0	7.7	8.0	10.0	11.2	12.0
Hackensack (Section B),	3.1	5.9	8.5	11.1	11.7	12.4
" (Section A),	4.4	7.2	10.4	11.1	11.6	12.2
Hackensack (B and A combined),	3.9	6.4	9.5	11.1	11.6	12.3

The solid lines of Chart 8 represent Hackensack's grade achievements in the fundamentals of arithmetic. When compared with the dotted line of the author's standard achievement for each fundamental, the success of Hackensack's instruction in this field becomes apparent.

The curves of age-progress in the four fundamentals are shown in Chart 9.

CHART No. 8

COMPARISON OF HACKENSACK GRADE SCORES IN ARITHMETIC WITH WOODY STANDARDS—JUNE, 1921



Woody Test—Series B.

Legend:

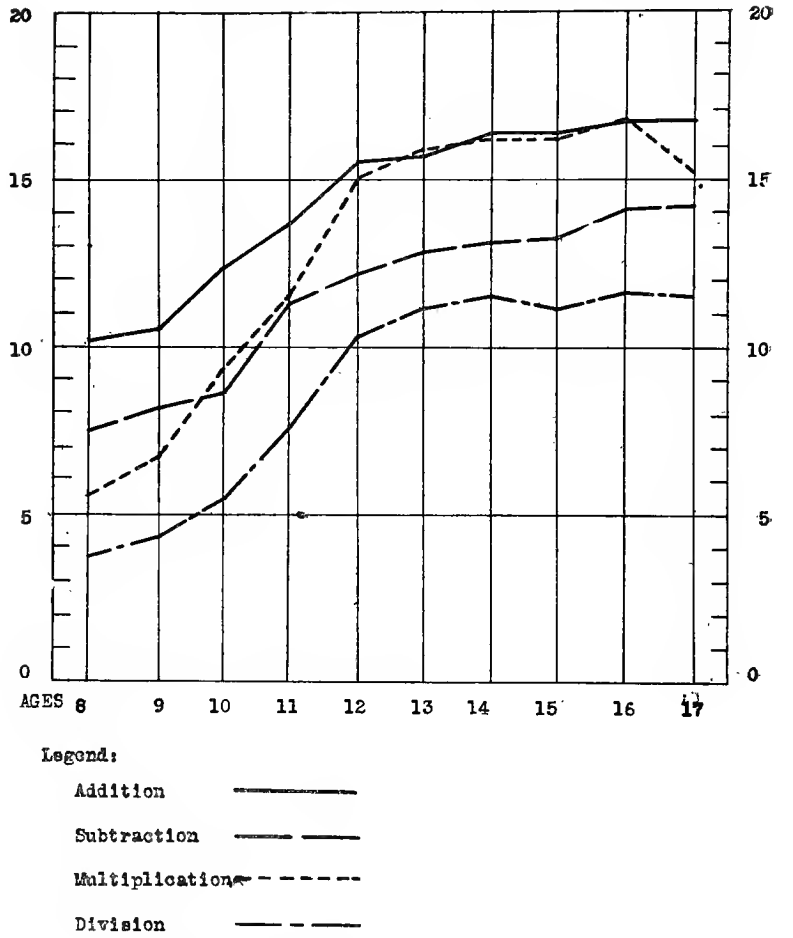
Solid line represents Hackensack.

Dotted line represents standard.

CHART No. 9

DISTRIBUTION OF HACKENSACK MEDIAN SCORES IN ARITHMETIC

Woody Tests—Series B—June, 1921



DISTRIBUTION OF WOODY SCORES BY AGES

In Tables N and O of the Appendix are given the age distributions of the Woody Scores on Series B for each of the fundamentals. These scores show very rapid progress from the eight-

year-olds up through the fourteen-year-olds. At this point the progress that is made is evidently slow.

THE COURTIS TESTS IN ARITHMETIC

In order to test the Hackensack children in speed and accuracy in arithmetic, the Courtis Tests Series B were used in Grades 4, 5 and 6 in each of the fundamentals.

Table XXIII shows the comparison between Hackensack and other cities in which the tests have been made. In four cases out of the total twelve cases in Table XXIII Hackensack ranks above the average city achievements. In the 4th Grade, Hackensack's results do not seem to be as good as the results secured in other cities. In the 5th Grade, Hackensack's results compare very favorably with those of other cities, and in the 6th Grade the results are superior to the other cities in the majority of cases. Hackensack's strongest work seems to be done in subtraction. The least satisfactory work is being done in division. The failure of the 4th Grade to meet the results achieved in other cities in division is no doubt due to a later emphasis upon division in the Hackensack schools.

TABLE XXIII

COMPARISON OF SCORES IN HACKENSACK* AND OTHER CITIES BY GRADES
(Courtis Arithmetic Test, Series B)

	In Grade		
	IV	V	VI
ADDITION: *Average City,*	*4.7*	*6.0*	*7.2*
Hackensack,	2.9	5.4	7.1
Baltimore, White pupils,	4.2	5.5	6.2
New Orleans, White pupils,	3.4	4.5	5.6
Seattle,	3.5	5.2	6.4
Detroit,	4.6	5.9	6.7
Boston,	5.2	6.7	8.3
SUBTRACTION: *Average City,*	*5.9*	*7.5*	*8.8*
Hackensack,	3.0	8.2	10.8
Baltimore, White pupils,	5.8	8.3	9.9
New Orleans, White pupils,	3.5	5.7	7.5
Seattle,	5.0	7.9	9.8
Detroit,	4.9	7.2	8.6
Boston,	6.4	7.7	9.6

	In Grade IV	V	VI
MULTIPLICATION: *Average City,*	*4.2*	*5.6*	*7.1*
Hackensack,	2.4	6.2	6.8
Baltimore, White pupils,	4.2	5.7	6.8
New Orleans, White pupils,	3.2	4.7	6.1
Seattle,	4.0	5.6	6.9
Detroit,	4.6	6.2	7.8
Boston,	4.0	5.6	7.2
DIVISION: *Average City,*	*2.6*	*4.7*	*7.1*
Hackensack,	.8	5.0	6.8
Baltimore, White pupils,	2.6	5.1	6.7
New Orleans, White pupils,	2.0	3.3	5.1
Seattle,	1.1	4.5	6.8
Detroit,	1.8	6.3	6.6
Boston,	3.0	4.9	7.5

* June, 1921.

THE DISTRIBUTION BY SCHOOLS

In the following table the Courtis test results are given so that comparisons may be made between schools tested in the various grades. These tests were only given in Schools No. 1, 2 and 4. The results in School No. 1 in Grades 4 and 5 are superior to the results obtained in the other two schools. In Grade 6 the results have been obtained for only Schools No. 2 and 4. There is a marked difference in achievement between these two schools, the results being strongly in favor of School No. 4.

It is clear that there is no marked uniformity in the achievements of the children in the various schools. An even greater range between classes of the same grade is secured when the results for individual classes are distributed. This has been done in Tables P, Q, R and S of the Appendix, which are submitted so that teachers may see for themselves the weaknesses and strength of their own classes.

TABLE XXIV

DISTRIBUTION OF SCORES IN COURTIS ARITHMETIC BY SCHOOLS

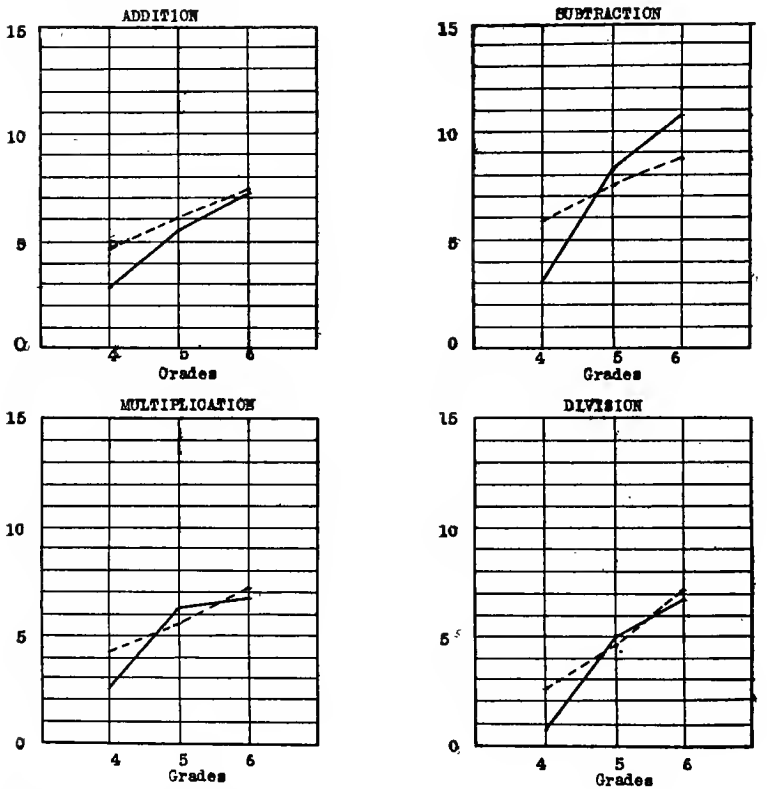
June, 1921

SCHOOL AND GRADE	NUMBER OF PROBLEMS CORRECTLY SOLVED																							No.	Median
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
SUBTRACTION																										
No. 1—IV, ..	26	18	11	16	19	15	8	5	2	6	1	1	..	..	..	..	..	..	..	..	..	..	..	..	128	3.6
No. 2—IV, ..	13	8	12	6	8	..	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52	2.4
No. 4—IV, ..	7	12	8	7	8	4	2	2	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	53	2.9
Total, ...	46	38	31	29	35	19	13	9	3	8	1	1	..	..	..	..	..	..	..	..	..	..	..	..	233	3.0
No. 1—V, ...	1	3	5	10	12	9	11	11	7	14	12	10	7	2	4	6	2	1	1	1	0	1	..	..	130	8.4
No. 2—V, ...	...	3	2	5	2	7	4	8	5	9	3	4	..	..	..	..	..	..	..	..	..	..	..	..	52	7.4
No. 4—V, ...	...	1	..	..	2	4	11	8	9	6	8	6	1	2	2	1	..	1	..	..	..	1	..	1	64	8.7
Total, ...	1	7	7	15	16	20	26	27	21	29	23	20	8	4	6	7	2	2	1	1	..	2	..	1	246	8.2
No. 2—VI, ..	...	..	1	2	1	3	4	3	7	7	7	9	5	5	1	1	1	1	2	..	..	..	..	..	60	10.3
No. 4—VI, ..	...	..	1	..	2	..	3	3	7	4	6	5	7	5	4	3	3	2	1	..	..	1	..	..	57	11.5
Total, ...	...	..	2	2	3	3	7	6	14	11	13	14	12	10	5	4	4	3	3	..	..	1	..	..	117	10.8
ADDITION																										
No. 1—IV, ..	23	16	17	29	11	12	9	6	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	128	3.3
No. 2—IV, ..	10	15	8	7	6	1	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52	2.1
No. 4—IV, ..	12	11	8	10	5	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	53	2.4
Total, ...	45	42	33	46	22	20	13	7	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	233	2.9
No. 1—V, ...	2	10	10	11	15	22	15	17	15	6	2	1	2	1	..	1	..	..	..	..	..	..	..	..	130	5.8
No. 2—V, ...	2	2	11	10	5	8	7	1	4	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	52	4.2
No. 4—V, ...	2	4	6	11	7	7	6	10	1	4	3	1	..	1	..	..	..	..	..	..	..	1	..	..	64	5.3
Total, ...	6	16	27	32	27	37	28	28	20	10	5	3	3	2	..	1	..	..	..	..	..	1	..	..	246	5.4
No. 2—VI, ..	1	2	7	5	8	7	6	10	4	7	..	1	2	..	..	..	..	..	..	..	..	..	..	..	60	6.0
No. 4—VI, ..	...	..	3	3	6	5	4	10	6	8	3	4	2	2	..	..	1	..	..	..	..	..	..	..	57	7.7
Total, ...	1	2	10	8	14	12	10	20	10	15	3	5	4	2	..	..	1	..	..	..	..	..	..	..	117	7.1
MULTIPLICATION																										
No. 1—IV, ..	26	25	19	15	11	19	9	2	0	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	128	2.7
No. 2—IV, ..	11	16	11	8	2	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52	1.9
No. 4—IV, ..	12	13	8	10	5	2	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	53	2.2
Total, ...	49	54	38	33	28	23	12	4	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	233	2.4
No. 1—V, ...	3	3	7	11	13	16	20	19	10	7	7	4	2	4	..	3	..	1	..	..	..	..	..	..	130	6.6
No. 2—V, ...	2	3	9	5	11	8	4	6	1	1	1	1	..	..	..	..	..	..	..	..	..	..	..	..	52	4.6
No. 4—V, ...	...	1	4	1	12	7	11	10	8	3	3	2	1	..	..	1	..	..	..	..	..	..	..	..	64	6.6
Total, ...	5	7	20	17	36	31	35	35	19	11	11	7	3	4	..	4	..	1	..	..	..	..	..	..	246	6.2
No. 2—VI, ..	...	4	7	3	11	8	10	7	4	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	60	5.6
No. 4—VI, ..	...	..	1	..	5	2	13	8	10	6	6	2	3	..	..	..	..	..	..	..	1	..	..	..	57	7.9
Total, ...	...	4	8	3	16	10	23	15	14	10	8	2	3	..	..	..	..	..	..	..	1	..	..	..	117	6.8
DIVISION																										
No. 1—IV, ..	76	25	9	10	2	2	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	128	.8
No. 2—IV, ..	35	7	3	4	1	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	52	.7
No. 4—IV, ..	41	7	3	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	53	.6
Total, ...	152	39	15	16	3	3	1	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	233	.8
No. 1—V, ...	8	16	14	13	15	13	13	13	15	3	2	3	..	..	2	..	..	..	..	..	..	..	..	..	130	4.9
No. 2—V, ...	7	7	8	5	4	7	3	2	5	..	2	1	..	..	..	1	..	..	..	..	..	..	..	..	52	3.8
No. 4—V, ...	2	5	6	5	8	6	7	8	3	2	6	2	1	..	1	..	1	..	1	..	..	..	..	..	64	6.0
Total, ...	17	28	28	23	27	26	23	23	23	5	10	6	1	..	3	1	1	..	1	..	..	..	..	..	246	5.0
No. 2—VI, ..																1	..	..	..	..	..	..	..	..	60	6.6
No. 4—VI, ..																1	1	..	..	..	1	..	..	..	57	7.3
Total, ...																2	1	..	..	..	1	..	..	..	117	6.8

Chart 10 shows that Hackensack has secured far better results in subtraction than are secured in the average city. The results in addition are less favorable, while those in multiplication and division compare, on the whole, most favorably with the results secured in the average city.

CHART No. 10

COMPARISON OF HACKENSACK SCORES IN COURTIS ARITHMETIC TEST (SERIES B) WITH AVERAGE CITY STANDARDS—JUNE, 1921



Legend:

Solid line represents Hackensack Scores.

Dotted lines represent average city achievements.

DISTRIBUTION BY AGES

The age distribution of the results of the Courtis Test, as shown in Table XXV, shows steady progress in all of the four fundamentals from the eighth year of age through the twelfth year of age. In addition and division, this progress is not as marked from the twelfth year on. In multiplication and subtraction, the progress is most marked from the eighth year of age through the fifteenth year of age. In other words, the arithmetic problem in Hackensack is not distinctly an age problem although there are age elements involved in the upper ages of the 4th, 5th and 6th Grades which were tested. This bears out the findings of other similar studies which tend to show that the older children are not as successful in these grades as the younger children of the same grades.

TABLE XXV

DISTRIBUTION OF SCORES IN ARITHMETIC BY AGES

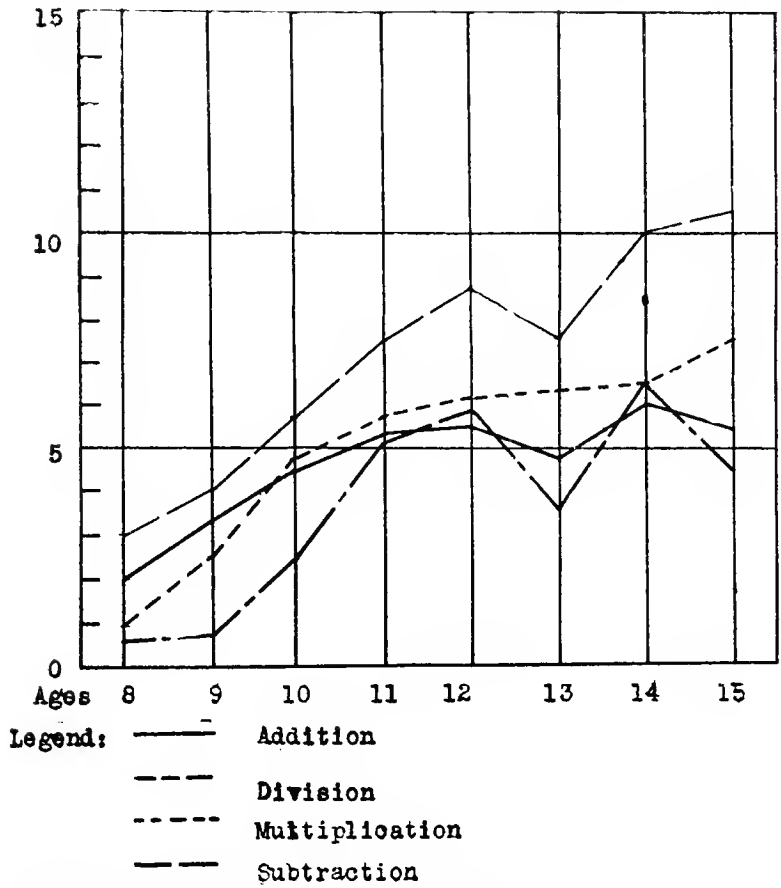
(Courtis Research Test Series B)

Hackensack, N. J., June, 1921

	AGES	NUMBER OF PROBLEMS SOLVED CORRECTLY																							Number	Median
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Addition	8, ...	5	6	2	4	3	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22	2.0
	9, ...	23	17	10	27	7	17	3	2	2	2	..	..	..	2	..	..	..	..	..	..	..	1	..	..	113	3.24
	10, ...	9	17	23	21	15	14	20	15	9	4	2	2	2	..	..	..	..	..	..	..	..	..	..	..	153	4.4
	11, ...	9	11	17	15	16	18	15	15	13	8	2	1	2	1	..	1	..	..	..	..	..	..	..	..	144	5.25
	12, ...	1	6	7	9	13	10	6	13	3	3	2	4	3	1	..	..	..	..	..	..	..	..	..	..	81	5.45
	13, ...	3	4	7	5	3	3	3	..	6	5	2	1	..	..	..	..	..	..	..	..	..	..	..	..	42	4.7
	14, ...	...	..	2	1	..	3	1	2	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	6.0
	15, ...	...	..	..	1	2	1	..	1	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	7	5.5
	Total, .	50	61	68	83	59	66	49	48	34	26	8	8	7	4	..	1	1	..	..	..	..	1	..	..	574	4.4
Division	8, ...	17	2	0	0	1	..	..	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	22	.65
	9, ...	65	12	8	6	7	6	2	3	1	..	1	..	..	..	1	..	..	..	1	..	..	..	..	..	113	.87
	10, ...	45	23	19	13	6	8	10	7	12	1	4	1	1	1	1	1	..	..	..	..	..	..	..	..	153	2.45
	11, ...	24	14	11	8	13	19	14	8	19	5	7	2	..	..	..	..	..	..	..	..	..	..	..	..	144	5.1
	12, ...	6	8	5	7	5	11	10	5	9	4	5	2	2	..	1	1	..	..	..	..	..	..	..	..	81	5.9
	13, ...	8	5	5	5	2	3	3	2	1	2	2	2	..	..	1	..	..	..	..	..	1	..	..	..	42	3.6
	14, ...	...	..	..	1	4	..	2	2	1	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	12	6.5
	15, ...	...	2	..	1	1	..	..	..	1	..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	7	4.5
	Total,	165	66	48	41	39	47	41	28	44	12	20	7	3	1	5	3	2	..	1	..	1	..	..	..	574	3.2
Multiplication	8, ...	4	6	4	2	2	2	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22	1.0
	9, ...	22	24	20	10	10	10	6	4	2	2	1	1	1	..	..	..	..	..	..	..	..	..	..	..	113	2.5
	10, ...	14	16	14	23	14	20	21	14	4	6	5	1	..	..	..	1	..	..	..	..	..	..	..	..	153	4.7
	11, ...	6	14	11	6	21	20	21	18	10	6	5	3	1	2	..	..	..	..	..	..	..	..	..	..	144	5.7
	12, ...	2	2	8	6	17	4	10	7	8	4	4	3	1	1	..	2	..	1	..	..	1	..	..	..	81	6.1
	13, ...	2	..	6	4	6	1	6	5	6	3	3	..	..	..	..	..	..	..	..	..	..	..	..	..	42	6.3
	14, ...	...	1	..	..	1	4	..	3	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	12	6.5
	15, ...	1	..	..	..	..	1	1	1	..	..	..	1	1	1	..	..	..	..	..	..	..	..	..	..	7	7.5
	Total, .	51	63	63	51	71	62	65	53	32	23	18	9	4	4	..	3	..	1	..	..	1	..	..	..	574	4.8
Subtraction	8, ...	1	5	5	2	2	2	1	1	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	22	3.0
	9, ...	21	11	13	11	12	11	6	5	6	8	3	2	1	1	..	..	..	..	..	..	..	1	..	1	113	4.0
	10, ...	13	11	13	12	17	15	11	11	8	11	11	6	4	2	2	4	1	1	..	..	..	..	..	..	153	5.7
	11, ...	5	12	6	7	10	11	15	12	9	13	9	12	9	9	0	6	3	1	0	3	..	..	1	..	144	7.5
	12, ...	2	2	2	4	6	3	9	5	9	9	6	8	5	2	3	1	2	2	..	..	..	1	..	..	81	8.8
	13, ...	1	4	1	4	4	2	2	5	2	3	3	4	..	1	2	2	1	1	..	..	..	..	..	..	42	7.6
	14, ...	...	..	..	..	2	1	1	1	..	1	2	..	2	..	1	..	..	..	1	..	..	..	..	..	12	10.0
	15, ...	1	..	..	..	1	..	..	..	..	1	1	1	..	..	..	..	..	1	1	..	..	..	..	..	7	10.5
	Total,	44	45	40	40	54	45	45	40	36	47	35	33	21	6	14	10	5	5	5	..	..	3	..	1	574	6.4

CHART No. 11

*DISTRIBUTION OF SCORES IN ARITHMETIC BY AGES, COURTIS SERIES B—JUNE, 1921



* Median of each age in each process graphed.

STONE REASONING TEST IN ARITHMETIC

The Stone Reasoning Test in Arithmetic consists of twelve problems which have a determined value. The first five have a value of 1 each; and sixth, a value of 1.4; the seventh, 1.2; the eighth 1.6; the ninth, tenth, eleventh, and twelfth 2 each. The test has been standardized and its wide use has furnished

data for the comparison of the results in any class with the achievements in other school systems. This test indicates the ability of the pupil to select and apply the appropriate process to the solution of a problem. It was given to 389 pupils in the sixth, seventh, and eighth grades of Hackensack. Table XXVI gives the tabulation of results and the median achievement of each grade tested:

TABLE XXVI

RESULTS IN STONE REASONING TESTS

GRADE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Number of Pupils	Median
6th,	3	5	12	13	31	24	17	15	7	3	2	..	..	..	..	..	..	..	132	5.1
7th,	1	0	3	16	20	45	28	27	21	15	11	11	2	2	1	1	..	..	204	6.6
8th,	..	..	..	..	1	2	5	3	9	10	7	4	3	2	2	3	1	1	53	9.7

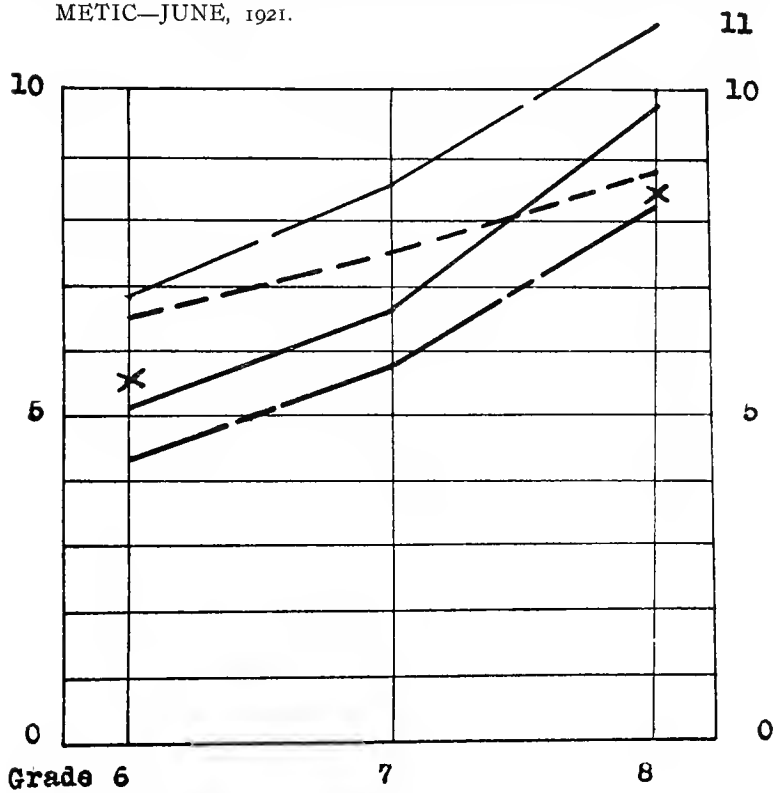
The test indicated a rather wide range of ability within the grades, but this is a condition usually found. The eighth grade made much the best showing. While on the whole, the results were satisfactory, the indications are that it would be well to give more attention to the application of the fundamental processes in the solution of practical problems.

A comparison with the median achievements of grades in a few other school systems is here given. It is seen that Hackensack's scores compare very favorably with other scores, with the exception of those for Salt Lake City.

	6	7	8
Butte,	4.4	5.8	8.2
Nassau County,	4.5	...	7.2
Paterson,	5.6	...	8.5
Hackensack,	5.1	6.6	9.7
Salt Lake City,	6.9	8.6	11.0

CHART No. 12

COMPARISON OF HACKENSACK WITH STANDARDS AND OTHER CITIES IN STONE REASONING TEST IN ARITHMETIC—JUNE, 1921.



ALGEBRA*

The Hotz Algebra Tests were given to all pupils in the high school who were studying algebra in June, 1921. Five tests were given during the same day. These tests are all part of Hotz' Series "B". The five tests are the addition and subtraction test, multiplication and division, equation and formula, the problem test, and the graph test. The final results are given in Table XXVII, where also are given the tentative standards set up by the author, together with the results obtained in other places.

Very definite and satisfactory progress is made in the Hackensack schools according to the time which students spend in the study of this subject. The tabulation is distributed according to the time when the students began algebra. In many cases these students may have taken algebra for a period, but may have omitted taking it for a semester or two. There is no assurance, therefore, that all pupils listed in any one column have had algebra for exactly the same period. Chart No. 13 shows the progress made by the groups with different training.

In comparing with the standards, the Hackensack results appear to be slightly less satisfactory than might have been expected. This may be due to the fact that algebra is spread over a longer period in Hackensack, or that there may have been undue emphasis on certain elements in other communities from which the standards were secured. The results of addition and subtraction, multiplication and division, are the best results secured by the Hackensack pupils.

*"First Year Algebra Scales"—H. C. Hotz, Teachers College Bureau of Publications, Columbia University, New York City.

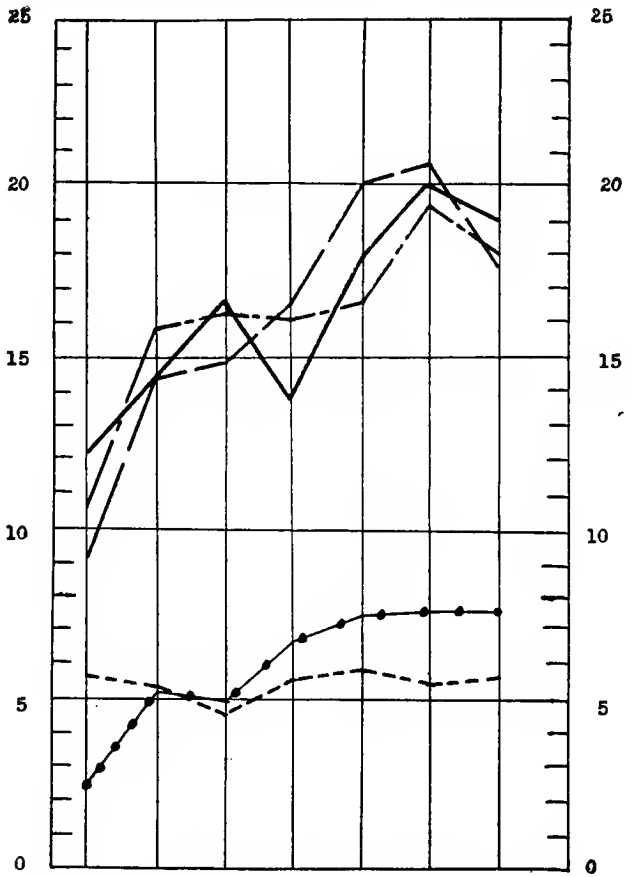
TABLE XXVII

COMPARATIVE SCORES IN HOTZ ALGEBRA TESTS—SERIES B, JUNE, 1921

	PUPILS REPORTING HAVING BEGUN ALGEBRA						
	In Feb. 1921	In Sept. 1920	In Feb. 1920	In Sept. 1919	In Feb. 1919	In Sept. 1918	In Feb. 1918
Months spent in Algebra Study,	5 mos.	10 mos.	.....	.....	12½ mos.	15 mos.	17½ mos.
Addition & Subtraction:							
Standards,	12.9 (6 mos.)	14.4 (9 mos.)	.....	.....	.....	.....	.....
Hackensack,	12.	14.5	16.5	14.	18.	20.	19.
Multiplication & Division:							
Standards,	14.0 (6 mos.)	16.3 (9 mos.)	.....	.....	.....	.....	.....
Hackensack,	10.4	15.9	16.3	16.0	16.5	19.5	18.0
Equation & Formula:							
Standards,	14.3 (6 mos.)	16.0 (9 mos.)	.....	.....	.....	.....	.....
Hackensack,	9	14.5	14.8	16.5	20.	20.3	17.8
Problem Test:							
Standards,	6.5 (6 mos.)	7.5 (9 mos.)	.....	.....	.....	.....	.....
Hackensack,	5.5	5.3	4.6	5.5	5.9	5.4	5.7
Graph Test:							
Standards,	3.7 (4½ mos.)	7.2 (9 mos.)	.....	.....	.....	.....	.....
Hackensack,	2.3	5.2	4.8	6.6	7.3	7.4	7.4

CHART No. 13

MEDIAN GRADE SCORES OF VARIOUS HACKENSACK CLASSES IN HOTZ ALGEBRA TESTS, SERIES B—JUNE, 1921



Class Began	Feb 1921	Sept 1920	Feb 1920	Sept 1919	Feb 1919	Sept 1918	Feb 1918
Time Spent	5 mo.	10 mo.			12 mo	15 mo	17 mo.

Legend:

Addition and Subtraction

Multiplication and Division

Equations and Formulae

Problems

Graphs

In Tables T, U, V, W and X of the appendix are given the distributions for each one of the tests, showing the number of problems correctly solved by each pupil who took the test, as well as the medians for each group.

LATIN

In Table XXVIII will be found the results of the Henmon Latin sentence tests which were applied to children in the high school. In this table the distribution is according to the number of years which students have studied Latin, and also according to the grade and the section in which these students are located at present. The results show a very definite and satisfactory progress from the first half-year of study to the final four years of study, and also a very satisfactory progress through the four years in the high school grades. The scores for the senior class indicate that the children who take Latin in the senior year are a highly selected group.

The Henmon word tests were also applied and show the same relative growth. It was not found possible to compare with other places. Considering the difficult conditions under which the children took the Latin tests, the results appear to be very satisfactory.

TABLE XXVIII

DISTRIBUTION OF HENMON LATIN SENTENCE SCORES BY YEARS OF STUDY

Hackensack, June, 1921

YEARS OF STUDY	NUMBER OF SENTENCES CORRECTLY TRANSLATED																															Number of Pupils	Median
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
5,	...	5	5	7	3	...	1	2	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	25	3.4
0,	...	3	1	6	10	13	14	8	3	3	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	63	5.8
5,	...	...	1	...	1	5	6	2	3	5	1	...	...	1	...	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	28	7.5
0,	...	...	...	1	...	1	3	4	3	7	6	4	1	4	3	...	1	1	1	1	2	...	1	...	1	...	...	...	...	...	...	45	10.6
5,	...	...	...	...	...	...	1	...	...	...	1	...	1	1	...	1	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	9	15.3
0,	...	...	...	...	...	...	...	...	1	...	...	1	2	2	...	...	3	...	...	...	1	1	...	1	...	...	...	1	...	...	...	13	15.3
5,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	2	...	...	...	...	...	...	...	...	5	.....
0,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	3	...	1	2	2	...	...	1	...	...	1	...	3	1	15	21.5
Total, ...	...	8	7	14	14	19	25	16	10	16	8	6	5	8	3	3	7	5	1	7	5	3	3	1	2	1	...	2	...	3	1	203	.....

DISTRIBUTION OF HENMON LATIN SENTENCE SCORES BY GRADES

GRADE AND SECTION	NUMBER OF SENTENCES CORRECTLY TRANSLATED																													Pupils Number of	Median
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
:sh.—B,	5	5	5	6	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22	3.2
A,	2	...	7	7	11	12	9	3	3	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	56	6.1
	7	5	12	13	11	12	10	3	3	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	78	5.2
)h.—B,	...	2	2	1	6	5	...	2	6	...	1	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	28	6.6
A,	1	...	...	...	1	5	3	4	4	4	3	1	2	3	...	1	2	...	1	1	...	1	...	...	...	...	...	...	...	...	37	10.1
	1	2	2	1	7	10	3	6	10	4	4	2	3	3	...	2	2	...	1	1	...	1	...	...	...	...	...	...	...	...	65	9.1
lior—B,	...	...	...	...	...	2	...	...	1	...	...	...	1	...	...	1	...	...	2	1	...	...	...	...	1	...	...	...	...	...	9	.....
A,	...	...	...	...	1	1	3	1	2	4	...	2	3	...	1	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	21	10.9
	...	...	...	...	1	3	3	1	3	4	...	2	4	...	1	3	...	...	2	1	...	...	...	1	1	...	...	...	...	...	30	11.5
Senior—B,	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	2	1	...	2	1	1	2	...	...	...	...	1	...	...	...	12	19.3
A,	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	1	2	2	2	...	1	1	...	...	1	...	3	1	18	21.0
	...	...	...	...	...	...	...	...	...	...	1	1	1	...	1	2	3	1	4	3	3	2	1	1	...	...	2	...	3	1	30	20.3
Total,	8	7	14	14	19	25	16	10	16	8	6	5	8	3	3	7	5	1	7	5	3	3	1	2	1	...	2	...	3	1	203	.....

Classification and Progress of School Children

CONTENTS

	Page.
Enrolment and Average Daily Attendance,	133
The Effect of Transfer from Other School Systems into the Hackensack School System on Over-age and Slow-progress Conditions,	140
The Record of Grade and Progress in School,	143
Double Promotions and Non-Promotions,	151
Withdrawals from School,	153
The High School Situation,	155
The Ratio of High School Enrolment to Total Population,	155
Rapid Increase in High School Membership,	156
Percentage of those Entering Retained to Graduate,	159
Increase in Non-Resident Students,	162
Individual Differences in High School Students,	162
The Number of Periods per Week per Student,	166
The Teaching Load,	166
Extra Curricular Activities,	166
Percentage of Graduates Who Attend College,	167

TABLES.

Table.		Page.
I.	Comparison of Total Enrolment and Average Daily Attendance, 1912–1920; Each Year Compared with the Preceding Year,	134
II.	Comparison of Total Enrolment, Average Daily Attendance, and Tardiness, Each Year Compared with the Preceding Year,	135
III.	Distribution of Pupils by Grades from 1915 to 1920 and Percentage Distribution of Pupils by Grades,	136
IV.	Distribution of Age Groups from 1911 to 1920, with Changes and Per Cents of Change,	137
V.	Distribution of Pupils by Percentages of Age Groups in the Enrolment,	138
VI.	Percentages of Under-age, Normal-age, and Over-age Pupils in the Hackensack Elementary Schools, 1914–20,	139
VII.	Percentage Distribution of Pupils who are One, Two, and Three or More Years Over Age in Grades One-Eight,	140
VIII.	Age-Grade Table for Elementary Schools,	142a
IX.	Age-Grade Table for Elementary Schools (Non-Transfers),	142b
X.	Age-Grade Table for Elementary Schools (Transfers),	142c

TABLE. PAGE.

XI. School Record of Grade and Progress in School—Entire System of Elementary Schools, ... 145
XII. School Record of Grade and Progress in School—Entire System of Elementary Schools—Those Not Transferred, 146
XIII. School Record of Grade and Progress in School—Entire System of Elementary Schools—for Children who have Transferred from Other School Systems, ... 147
XIV. Percentage of Promotions, Double-promotions and Non-promotions based on Number of Students in Each Grade at End of Term—Semesters 1917, 1918, 1920 and 1921, ... 152
XV. Withdrawals from the Hackensack Schools, 1918–20—Classified as to Cause, ... 154
XVI. Ratio of High School Enrolment to Population, etc., ... 156
XVII. Increases in Enrolment—Hackensack High School—Distribution by Courses, Years and Totals, ... 158
XVIII. Enrolment by Classes and Percentage Retained for Graduation, 159
XIX. Elimination by Courses, Classes and Sex, 1920–21, ... 160
XX. Elimination from High Schools on Basis of Every 100 Enrolled in First Year, ... 161
XXI. Number of Graduates by Courses, ... 162
XXII. Non-Resident Student Facts, ... 162
XXIII. Failures by Subjects, ... 164
XXIV. Number and Percentage of High School Students on Roll at End of Term who Failed in 1, 2, 3, 4 or 5 Subjects at the End of Each Semester, ... 165

CHARTS.

CHART. PAGE.

1. Proportion of Children Over Age, of Normal Age, and Under Age—Hackensack Elementary School Grades, ... 148
2. Proportion of Pupils in Hackensack Elementary School Grades Making Slow, Rapid, and Normal Progress, ... 149
3. Non-Promotions in Hackensack Elementary Schools Due to Various Causes, ... 151

Classification and Progress of School Children

ENROLLMENT AND AVERAGE DAILY ATTENDANCE

During the period 1912-1921 the enrollment in the Hackensack schools has grown 33.7 per cent. In 1912 the total enrollment was 3,290; in 1921, 4,399. The average daily attendance for this same period has grown 36.6 per cent. These facts are shown in Table I. From this table it is also evident that the percentage which average daily attendance is of enrollment has increased from 79.9 per cent in 1912 to 81.6 per cent in 1921. There has been a steady increase of enrollment, except for the war year 1917, and the increase in average daily attendance has been slightly greater.

The relation of average daily attendance to total enrollment may be considered one of the indices of the efficiency of a school system and especially of the efficiency of the attendance department. No standard ratio between total enrollment and average attendance has been determined because such a ratio would vary within certain limits according to conditions prevailing in a community. It does seem reasonable to expect an average daily attendance which is 85 per cent or more of the total enrollment. An attendance department should, at least, set a standard of this kind which it should endeavor to attain. It is recommended that every effort be made to raise the percentage which average daily attendance bears to total enrollment in Hackensack. Without doubt this percentage would be greatly increased through the agency of a school census and a permanent continuing school census department which would assume the responsibility of discovering why there was not a higher ratio between these two elements and of applying the remedies to secure better results.

TABLE I.

COMPARISON OF TOTAL ENROLLMENT AND AVERAGE DAILY ATTENDANCE, 1912-1920; EACH YEAR COMPARED WITH THE PRECEDING YEAR

Year	Total Enrollment	Change over Preceding Year	Per Cent of Change	Average Daily Attendance	Change over Preceding Year	Per Cent of Change	Per Cent which Average Daily Attendance is of Enrollment
1912	3,290	.....	.....	2,629	.....	.....	79.9
1913	3,380	90	2.7	2,725	96	3.6	80.6
1914	3,466	86	2.5	2,762	37	1.4	79.7
1915	3,564	98	2.8	2,951	189	6.8	82.8
1916	3,601	37	1.0	2,856	-95	-3.2	79.3
1917	3,488	-113	-3.1	2,828	-28	-1.0	81.8
1918	3,752	264	7.6	2,978	150	5.3	79.4
1919	4,029	277	7.3	3,139	161	5.4	77.9
1920	4,220	191	4.7	3,286	147	4.7	77.9
1921	4,399	179	4.2	3,590	304	9.2	81.6
Change 1912–1921	1,109	.....	33.7	.....	961	36.6	.....

In Table II the comparison is made between total enrollment and average daily attendance, and also the total number of cases of tardiness for each of the years 1912 to 1921. The number of cases of tardiness is shown to have increased far beyond the increases in total enrollment and in average daily attendance. The percentage of change from 1912 to 1921 in total cases of tardiness has been 75.9 per cent. This great prevalence of tardiness furnishes further evidence for a better organization of the attendance department and a greater emphasis on the values to be derived from promptness and regularity of attendance.

TABLE II.

COMPARISON OF TOTAL ENROLMENT, AVERAGE DAILY ATTENDANCE, AND TARDINESS, EACH YEAR COMPARED WITH THE PRECEDING

Year	Total Enrollment	Per Cent of Change	Average Daily Attendance	Per Cent of Change	Total Cases Tardiness	Per Cent of Change
1912	3,290	.....	2,629	.....	2,732	.....
1913	3,380	2.7	2,725	3.6	3,418	25.1
1914	3,466	2.5	2,762	1.4	3,541	3.5
1915	3,564	2.8	2,951	6.8	4,318	21.9
1916	3,601	1.0	2,856	-3.2	3,881	-10.2
1917	3,488	-3.1	2,828	-1.0	4,535	16.8
1918	3,752	7.6	2,978	5.3	6,051	33.4
1919	4,029	7.3	3,139	5.4	4,780	-21.1
1920	4,220	4.7	3,286	4.7	4,905	2.6
1921	4,399	4.2	3,590	9.2	.....	.....
Total Increase	1,109	33.7	961	36.6	2,173	79.5

In Table III, data are available showing the distribution of pupils by grades as of the enrollment for each year of the period 1915-1920. The largest number of children in Hackensack do not necessarily attend the first grade. In 1920 there were more children listed in the first grade than in any other grade. In 1915 there were more children in the second grade. In 1916 the third grade enrolled more children during the January period than any other of the elementary grades. Evidently the tendency that has prevailed in many communities of retarding children in the first grade to a greater degree than other grades has not prevailed in Hackensack over the period 1915-1920. For this period, 1915-1920, the greatest percentage of increase has occurred in the first, sixth, seventh, and eighth grades. It is most satisfactory to find that the seventh and eighth grades have larger percentages of increase than any of the grades one to six, and that the percentage of increase in the eighth grade is twice that of grade one. These are indications of a satisfactory adjustment of the curriculum to the needs of children, and of an increasing development of a holding power of the schools in this community.

In the second part of this table the figures for age grade enrollment have been changed into percentages of the total enrollment. It will be noted that the greatest increase in percentage of total enrollment has also been in the eighth grade, and that the seventh grade increase is satisfactory as compared with the changes for this period in grades one to six. This is further evidence of the desirable increase of students in the upper grades of the schools.

TABLE III

DISTRIBUTION OF PUPILS BY GRADES FROM 1915 TO 1920

January Enrollment for Each Year

Grade	*1915*	*1916*	*1917*	*1918*	*1919*	*1920*	*Change from 1915-1920*	*Per cent of Change from 1915-1920*
1,	350	341	340	351	314	402	52	14
2,	374	303	299	299	301	316	-58	-16
3,	334	378	319	303	330	345	11	3.2
4,	307	324	329	319	341	320	13	4.2
5,	312	303	309	307	301	310	-2	-.6
6,	261	256	273	272	256	300	39	14
7,	205	223	230	258	251	236	31	15
8,	170	183	183	188	204	218	48	28
Total,	2313	2311	2282	2297	2298	2447	134	5.7

PERCENTAGE DISTRIBUTION OF PUPILS BY GRADES

1915-1920 January Enrollment

Grade	*1915*	*1916*	*1917*	*1918*	*1919*	*1920*	*Average*
1,	15	15	15	15	14	16	15.0
2,	16	13	13	13	13	13	13.5
3,	14	16	14	13	14	14	14.0
4,	13	14	14	14	15	13	13.8
5,	13	13	13	13	13	13	13.0
6,	12	16	12	12	11	12	12.5
7,	9	10	10	11	11	10	10.0
8,	7	8	8	8	9	9	8.0
Total,*	100	100	100	100	100	100	

* If carried to next decimal place these figures would total 100.

Another method of measuring the holding power of the school is by using the age distribution. Such a distribution for the years 1911-1920 as secured from the annual reports submitted to the New Jersey State Educational Department is shown in Table IV. It will be noted that each age group increases in size until it reaches the fifteenth year. At that point a falling off begins. The ability of the Hackensack schools to hold children

through the fourteenth year is noteworthy. Few school systems have been as successful as Hackensack in thus keeping children in school. It is not only a tribute to the school, but also a tribute to the type of population living in Hackensack. The effort should be made to increase the holding power of the schools after the fourteenth year. The necessary curriculum adjustment will be one of the progressive steps toward this end.

TABLE IV

DISTRIBUTION OF AGE GROUPS FROM 1911 TO 1920, WITH CHANGES AND PER CENT OF CHANGE*

AGE	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	Change From 1911	Per Cent of Change
4, ...	139	162	177	168	204	208	150	180	247	210	.....	.....
5, ...	285	243	283	292	249	269	258	240	285	349	.....	.....
6, ...	270	288	255	306	339	284	294	299	301	345	.....	.....
7, ...	275	287	271	266	302	340	263	316	314	312	.....	.....
8, ...	242	273	306	312	288	291	346	302	329	335	.....	.....
9, ...	239	240	287	302	326	302	301	245	308	351	.....	.....
10, ...	262	249	250	286	302	302	291	314	345	333	.....	.....
11, ...	229	273	259	260	278	308	285	281	307	356	.....	.....
12, ...	231	240	265	261	259	289	302	309	320	324	.....	.....
13, ...	258	241	227	261	266	241	313	338	358	350	211	152
14, ...	257	246	255	235	265	267	238	344	354	348	63	22
15, ...	217	227	225	198	201	244	202	238	294	300	30	11
16, ...	136	162	165	159	128	121	129	123	143	165	—110	—40
17, ...	86	103	103	94	85	66	65	84	72	95	—147	—60
18, ...	50	39	49	55	53	43	40	32	42	31	—208	—87
19, ...	12	15	9	11	16	24	7	7	6	15	—247	—94
20, ...	....	2	....	....	3	2	4	....	4	3	—226	—99
Total, ...	3188	3290	3380	3466	3564	3601	3488	3752	4029	4220	.....	.....

* Data secured from the age distributions of the annual reports to the State Department.

In Table V the age distribution of pupils of the previous table has been converted into percentages which each age group is of the total enrollment. The differences in percentages in 1911-1920 are very slight for each age group. In fact, the variations in percentages for each age group extending over the years 1911-1920 are such as to indicate that all age groups, with a possible exception of the ages above fifteen, are maintaining their relative proportion of total enrollment. It is rather surprising to find small decreases in the percentages occurring in the ages above fifteen. It is interesting to note that the crucial ages, 13, 14, 15, have slightly increased their percentages of the total enrollment. The emphasis on the attendance of age

groups should evidently be placed on the two extremes, namely, upon children 5, 6, and 7 years of age, as well as children above the 15th year period.

TABLE V

DISTRIBUTION OF PUPILS BY PERCENTAGES OF AGE GROUPS IN THE ENROLLMENT

AGE	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	Changes from 1911
4,	4.3	4.9	5.2	4.8	5.8	5.8	4.3	4.7	6.1	4.9	.6
5,	8.9	7.3	8.3	8.4	6.9	7.4	7.4	6.4	7.0	8.2	—.7
6,	8.4	8.6	7.5	8.8	9.5	7.8	8.4	7.9	7.4	8.2	—.2
7,	8.6	8.6	8.0	7.6	8.4	9.4	7.4	8.4	7.7	7.3	—1.3
8,	7.5	8.3	9.0	9.0	8.0	8.0	9.9	8.0	8.1	7.9	.4
9,	7.5	7.3	8.3	8.7	9.1	8.3	8.6	9.1	7.6	8.3	.8
10,	8.2	8.4	7.3	8.2	8.4	8.3	8.3	8.4	8.5	7.9	—.3
11,	7.1	8.3	7.7	7.5	7.8	8.4	8.2	7.4	7.6	8.4	1.3
12,	7.2	7.3	7.8	7.5	7.2	8.0	8.6	8.2	7.9	7.6	—.4
13,	8.2	7.3	6.7	7.5	7.3	6.6	8.9	9.0	8.8	8.3	.1
14,	8.2	7.3	7.5	6.7	7.3	7.4	6.8	9.1	8.7	8.3	.1
15,	6.8	6.8	6.7	5.7	5.6	6.6	5.7	6.4	7.2	7.1	.3
16,	4.2	4.9	4.8	4.5	3.5	3.3	3.7	3.2	3.5	3.9	—.3
17,	2.6	3.1	3.0	2.7	2.3	1.7	1.8	2.2	1.7	2.2	—.4
18,	1.5	1.1	1.4	1.5	1.4	1.1	1.1	.8	1.9	.8	—.7
19,	.3	.4	.2	.3	.5	.6	.2	.2	.1	.4	—.1
20,	....	....	....	....	.1	....	.1	....	.1	.1	.1

In Table VI are shown the percentages of over-age, normal age and under-age children in the Hackensack elementary schools for the period 1914–1920. The distribution of percentages is also given by grades. In the last column of this table it will be noted that the percentage of under-age children for the period 1914–1920 has been increased from 9 to 17; that the percentage of normal-age children has been increased from 63 to 66; that the percentage of children who may be considered over-age has been reduced from 28 to 17. These changes in age conditions over this period are indicative of very satisfactory progress in the adjustment of curriculum to the child. Such an adjustment has been brought about in Hackensack through the placement of over-age children in special classes; through the establishment of foreign classes, and through the reduction of the teaching load where children creating a particular problem have been congregated. There is every evidence in these figures of adequate supervision on the part of school principals and supervising principal and of an effort to maintain a normal condition where undesirable conditions had developed.

It may be expected that there will be a further reduction in over-age conditions in the next few years, and perhaps even a further increase in the percentage of children who are under-age, and therefore in the percentage of those who are making rapid progress. Evidently the greatest task lies in the over-age conditions still to be found in grades 3 to 6.

TABLE VI

PERCENTAGE OF UNDER-AGE, NORMAL-AGE, AND OVER-AGE PUPILS IN THE HACKENSACK ELEMENTARY SCHOOLS, 1914–1920

YEAR	GRADE								Total
	1st	2d	3d	4th	5th	6th	7th	8th	
Under Age									
1914, ...	16	10	8	6	9	4	6	10	9
1915, ...	10	18	13	8	8	11	4	8	11
1916, ...	15	9	16	13	9	10	10	6	11
1917, ...	13	13	10	12	12	9	7	14	11
1918, ...	13	14	17	13	16	17	15	18	15
1919, ...	13	13	15	15	11	23	20	19	16
1920, ...	15	14	11	15	19	15	26	24	17
Normal Age									
1914, ...	74	68	62	62	48	56	59	66	63
1915, ...	82	67	62	60	62	56	62	63	64
1916, ...	82	78	67	59	57	62	63	61	66
1917, ...	78	78	72	63	54	58	67	65	67
1918, ...	81	72	70	70	56	51	60	62	66
1919, ...	92	75	68	69	62	52	55	62	66
1920, ...	76	75	69	65	59	63	58	56	66
Over Age									
1914, ...	10	22	30	32	43	40	36	24	28
1915, ...	8	15	25	32	30	33	34	39	25
1916, ...	3	13	17	28	34	28	27	33	23
1917, ...	9	9	18	25	34	33	26	21	22
1918, ...	6	14	13	17	28	32	25	20	19
1919, ...	5	12	17	16	27	25	25	19	18
1920, ...	9	11	20	20	22	22	16	20	17

In Table VII the over-age children of grades 1 to 8 have been distributed according to the number of children one year over-age, two years over-age and three or more years over-age. Each of these groups shows a very satisfactory reduction in percentages during the period 1915–1920. In all the grades from 1 to 8 has the percentage of children one year over-age been reduced very perceptibly. In all grades except the first and third the percentages of children who are two years over-age

have been reduced. In all grades except the first have the percentages of children who are three or more years over-age been reduced during this period. This is further evidence that the proper individual attention is being paid to those cases which do not adjust themselves readily to the school curriculum. Only constant care and thorough diagnoses of school conditions and school problems on the part of teachers and the supervisory staff could have brought about the very satisfactory results evident in this table.

TABLE VII

PERCENTAGE DISTRIBUTION OF PUPILS WHO ARE ONE, TWO AND THREE OR MORE YEARS OVER AGE IN GRADES 1–8

One Year Over Age

YEAR	GRADE								Total
	1st	2nd	3rd	4th	5th	6th	7th	8th	
1915, ...	4.8	10.0	15.2	19.5	18.2	17.6	25.3	25.2	15.6
1916, ...	2.6	9.9	12.1	17.9	21.1	18.3	15.6	28.4	14.7
1917, ...	7.9	6.6	13.4	14.5	21.0	22.3	16.9	16.3	14.8
1918, ...	3.4	10.0	9.9	11.9	17.0	22.0	18.2	14.8	12.9
1919, ...	4.7	7.6	11.2	9.6	16.8	19.1	18.7	15.1	12.4
1920, ...	4.0	9.1	12.1	12.8	12.9	16.0	12.7	15.1	11.4
Two Years Over Age									
1915, ...	1.7	3.4	5.0	6.5	7.3	11.4	5.0	10.0	6.0
1916, ...	.6	1.6	3.9	7.4	8.5	7.8	9.4	4.3	5.2
1917, ...	.4	2.3	3.1	7.8	9.0	9.8	7.3	3.8	5.2
1918, ...	2.5	2.6	1.6	4.0	7.1	8.8	6.1	4.9	4.6
1919, ...	.6	4.3	4.2	4.5	6.3	5.4	5.1	3.0	4.0
1920, ...	3.0	1.5	6.9	4.6	5.8	5.6	3.0	4.0	4.3
Three or More Years Over Age									
1915, ...	.8	1.4	4.4	4.8	3.7	4.2	2.4	3.2	3.0
1916, ...	.3	1.3	1.5	3.3	8.3	1.9	1.3	.5	1.9
1917, ...	.6	.3	1.5	2.4	3.8	.7	1.8	1.1	1.6
1918, ...	.5	1.3	1.2	1.5	3.6	1.1	.7	.0	1.3
1919, ...	.0	.3	1.8	2.1	2.0	.8	.4	.5	1.0
1920, ...	2.0	.0	.6	2.8	2.9	.7	.4	1.0	1.3

THE EFFECT OF TRANSFER FROM OTHER SCHOOL SYSTEMS INTO THE HACKENSACK SCHOOL SYSTEM ON OVER-AGE AND SLOW PROGRESS CONDITIONS

In the preceding age-grade study the data have been taken from the annual printed reports of the superintendent of schools.

In each case the age span for the normal period for each grade was considered in these reports to be two years. This made the age-grade tables of the period 1915–1920 comparable, as the same age spans were used throughout. It was thought desirable to discover whether the children who had spent all of their school lives in the Hackensack schools were classified to the same degree in the over-age group or in the slow-progress group as those children who are now in the Hackensack schools, but who had spent part of their school lives in other school systems. In other words, the transfer of children from other school systems into the Hackensack school system has what bearing upon the progress that the child makes within the local school system?

With this object in mind, all elementary teachers in Hackensack were asked to submit a record of progress and age for all children in their respective classes. A special age computation table was used which would permit all teachers to calculate ages on the same basis. In submitting this information teachers were asked to separate pupils who have attended no other school system than that of Hackensack, and those who had at some time or other attended school systems other than the local one. The age-grade data thus secured were consolidated on Strayer-Engelhardt Age-Grade Tables for Elementary Schools, as shown in Tables VIII, IX and X.

In these age-grade tables the normal age span for any one grade is taken as one and one-half years, thus making a difference with respect to the percentages of over-age and under-age children that are found in the previous tables, where two years were taken as the normal-age span. The three age-grade tables, however, are comparable between themselves. Table VIII includes all of the elementary school children in Hackensack as of February, 1921. Table IX shows all of the elementary school children in Hackensack who have always attended the Hackensack public schools. Table X includes the 613 elementary school children in Hackensack who have moved from other school systems into the Hackensack school system.

The following summary shows the entire situation with respect to the percentage of children over-age and under-age in these three groups.

	All Elementary School Children	Elementary School Children Who Have Always Attended Hackensack Schools	All of the Children Who Have Entered the Hackensack School System from Other School Systems
Percentage of children of normal age, ...	43.9	48.1	33.7
Percentage of children over age, ...	41.9	36.4	56.
Percentage of children under age, ...	14.2	15.5	10.3

When children stay in the local school system throughout their school lives, only 36.4 per cent of them are found within the over-age group on the basis of one and one-half years for the normal-age span. When children transfer from other school systems into the Hackensack school system the adjustment apparently becomes difficult, for 56 per cent of such children are classified as over-age for their grades. The problem which presents itself in Hackensack is the adjustment of the work for these children who are transferred from other school systems, so that the percentage of over-age children may be considerably less. The percentage of over-age children among those who spend all of their school lives in the local school system is very small, according to the rigid method of calculation utilized in Tables VIII, IX and X.

THE RECORD OF GRADE AND PROGRESS IN SCHOOL

Supplementing the age-grade study a grade-progress study was made, involving the same three elements, namely, all ele-

TABLE VIII

FORM 166

AGE-GRADE TABLE
FOR ELEMENTARY SCHOOLS

Schools Hackensack Elementary — Compiled ...

Grade	Kindergarten	First Grade		Second Grade		Third Grade		Fourth Grade		Fifth Grade		Sixth Grade	
Section		B	A	B	A	B	A	B	A	B	A	B	A
Age period includes all children whose ages run from	4 yrs. 9 mos. to 5 yrs. 9 mos.	5 yrs. 3 mos. to 6 yrs. 3 mos.	5 yrs. 9 mos. to 6 yrs. 9 mos.	6 yrs. 3 mos. to 7 yrs. 3 mos.	6 yrs. 9 mos. to 7 yrs. 9 mos.	7 yrs. 3 mos. to 8 yrs. 3 mos.	7 yrs. 9 mos. to 8 yrs. 9 mos.	8 yrs. 3 mos. to 9 yrs. 3 mos.	8 yrs. 9 mos. to 9 yrs. 9 mos.	9 yrs. 3 mos. to 10 yrs. 3 mos.	9 yrs. 9 mos. to 10 yrs. 9 mos.	10 yrs. 3 mos. to 11 yrs. 3 mos.	10 yrs. 9 mos. to 11 yrs. 9 mos.	11 yrs. 3 mos. to 12 yrs. 3 mos.
Age	NORMAL AGE LIMITS FOR ENTRANCE INTO EACH GRADE							NORMAL AGE LIMITS FOR ENTRANCE INTO EACH GRADE						NORMAL A
	B O T	B O T	B O T	B O T	B O T	B O T	B O T	B O T	B O T	B O T	B O T	B O T	B O T	B O T
4½ yrs.	6 yrs. 3 mos. to 6 yrs. 9 mos.													
5 yrs.	6 yrs. 9 mos. to 7 yrs. 3 mos.													
5½ yrs.	7 yrs. 3 mos. to 7 yrs. 9 mos.			3										
6 yrs.	7 yrs. 9 mos. to 8 yrs. 3 mos.		5	26	2									
6½ yrs.	8 yrs. 3 mos. to 8 yrs. 9 mos.		9	68	17	2								
7 yrs.	8 yrs. 9 mos. to 9 yrs. 3 mos.		8	90	49	15	6							
7½ yrs.	9 yrs. 3 mos. to 9 yrs. 9 mos.		3	81	24	52	17	4						
8 yrs.	9 yrs. 9 mos. to 10 yrs. 3 mos.		1	17	21	38	42	15	7	1				
8½ yrs.	10 yrs. 3 mos. to 10 yrs. 9 mos.			4	13	31	32	40	16	6	1			
9 yrs.	10 yrs. 9 mos. to 11 yrs. 3 mos.			5	3	17	22	33	40	12	5	2		
9½ yrs.	11 yrs. 3 mos. to 11 yrs. 9 mos.			4	1	6	6	34	35	42	21	4	2	
10 yrs.	11 yrs. 9 mos. to 12 yrs. 3 mos.				4		7	16	20	46	22	16	4	
10½ yrs.	12 yrs. 3 mos. to 12 yrs. 9 mos.			1	3	3	5	6	13	34	16	32	20	
11 yrs.	12 yrs. 9 mos. to 13 yrs. 3 mos.			1	1	2	3	5	11	27	24	40	25	1
11½ yrs.	13 yrs. 3 mos. to 13 yrs. 9 mos.				1		3	1	4	6	17	29	25	2
12 yrs.	13 yrs. 9 mos. to 14 yrs. 3 mos.						1	2	4	9	14	15	23	2
12½ yrs.	14 yrs. 3 mos. to 14 yrs. 9 mos.							1	1	5	13	16	19	2
13 yrs.	14 yrs. 9 mos. to 15 yrs. 3 mos.								1	1	9	8	15	1
13½ yrs.	15 yrs. 3 mos. to 15 yrs. 9 mos.							1	2	3	3	5	9	1
14 yrs.	15 yrs. 9 mos. to 16 yrs. 3 mos.								1	1	2	2	3	
14½ yrs.	16 yrs. 3 mos. to 16 yrs. 9 mos.								1		2	4	5	
15 yrs.	16 yrs. 9 mos. to 17 yrs. 3 mos.										1	2	4	
15½ yrs.	17 yrs. 3 mos. to 17 yrs. 9 mos.													
16 yrs.	17 yrs. 9 mos. to 18 yrs. 3 mos.									1			2	
16½ yrs.	18 yrs. 3 mos. to 18 yrs. 9 mos.													
17 yrs.	18 yrs. 9 mos. to 19 yrs. 3 mos.													
17½ yrs.	19 yrs. 3 mos. to 19 yrs. 9 mos.													
18 yrs.	19 yrs. 9 mos. to 20 yrs. 3 mos.													
Total Number		25	249	159	178	148	158	155	193	150	175	156	1	
Number of normal age children		14	158	73	100	74	66	75	88	38	72	50		
Number of over-age children		12	63	47	61	49	73	58	87	85	81	80		
Number of under-age children			28	19	17	25	19	23	18	27	22	26		
Per cent of children of normal age		56.0	63.4	52.6	56.2	50.0	41.8	48.1	45.6	25.3	41.1	32.1	39	
Per cent of children over age		48.1	25.3	33.8	34.3	33.1	46.2	37.2	45.1	56.6	46.3	51.3	45	
Per cent of children under age			11.3	13.6	9.5	16.9	12.0	14.7	9.3	18.1	12.6	16.6	14	

TABLE IX

AGE-GRADE TABLE
FOR ELEMENTARY SCHOOLS

Compiled June 1921 (Date)   Ages Computed* as of March [redacted]l, 19 21

…cond Grade		Third Grade		Fourth Grade		Fifth Grade		Sixth Grade		Seventh Grade		Eighth Grade		Total
	A	B	A	B	A	B	A	B	A	B	A	B	A	
NORMAL AGE LIMITS FOR ENTRANCE INTO EACH GRADE														
…mos. to …mos.	7 yrs. 3 mos. to 8 yrs. 3 mos.	7 yrs. 9 mos. to 8 yrs. 9 mos.	8 yrs. 3 mos. to 9 yrs. 3 mos.	8 yrs. 9 mos. to 9 yrs. 9 mos.	9 yrs. 3 mos. to 10 yrs. 3 mos.	9 yrs. 9 mos. to 10 yrs. 9 mos.	10 yrs. 3 mos. to 11 yrs. 3 mos.	10 yrs. 9 mos. to 11 yrs. 9 mos.	11 yrs. 3 mos. to 12 yrs. 3 mos.	11 yrs. 9 mos. to 12 yrs. 9 mos.	12 yrs. 3 mos. to 13 yrs. 3 mos.	12 yrs. 9 mos. to 13 yrs. 9 mos.	13 yrs. 3 mos. to 14 yrs. 3 mos.	
T	B G T	B G T	B G T	B G T	B G T	B G T	B G T	B G T	B G T	B G T	B G T	B G T	B G T	B G T
														3
2														31
15	1													91
45	14	6												160
22	65	14	4											127
19	56	16	12	7	1									125
12	25	24	56	14	2	1								116
2	18	18	51	32	8	4								115
1	4	5	25	29	33	16	1	1						116
1		2	9	17	36	18	14	2	2	2				105
2	1	3	5	7	25	13	24	16	2	1				100
1		1	3	6	14	21	23	18	10	7	1			107
		2	1	3	4	10	17	21	17	9	4	3		91
			1	1	3	11	9	14	15	15	6	2	3	79
			1		3	5	10	14	16	20	15	14	14	112
					1	6	5	5	12	18	14	19	8	88
					1		3	6	5	16	8	15	13	66
							1	2	2	7	12	16	11	51
						1	1	4	3	1	11	8	8	37
								1	1	2	3	3	2	14
										1	3	3	12	19
										1	3	2	4	10
													1	1
													1	1
122	146	112	125	118	131	106	110	104	86	100	82	83	76	1759
67	88	62	64	61	69	81	47	39	32	35	29	32	24	846
38	43	31	46	36	61	54	46	46	39	46	42	32	28	640
17	15	20	16	21	11	21	17	19	16	19	11	19	24	273
4.9	60.3	64.9	51.2	51.7	52.7	29.3	42.7	37.6	37.3	36.0	35.3	38.6	31.6	48.1
1.2	29.5	27.5	36.0	30.5	39.0	50.9	41.8	44.3	46.4	46.0	61.3	38.6	36.8	36.4
3.9	10.2	17.6	19.8	17.8	8.3	19.8	15.5	10.2	17.3	19.0	13.4	22.8	31.6	15.5

TABLE X

FORM 806

AGE-GRADE TABLE
FOR ELEMENTARY SCHOOLS

Compiled

		TRANSFERS																					
	GRADE	KINDERGARTEN		FIRST GRADE		SECOND GRADE		THIRD GRADE		FOURTH GRADE		FIFTH GRADE		SIXTH GRADE		SEVENTH GRADE		EIGHTH GRADE		NORMAL	
	SECTION			B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A
		NORMAL AGE LIMITS FOR ENTRANCE INTO EACH GRADE																					
Age	Age period includes all children whose ages run from	4 yrs. 9 mos. to 5 yrs. 9 mos.	5 yrs. 3 mos. to 6 yrs. 3 mos.	5 yrs. 9 mos. to 6 yrs. 9 mos.	6 yrs. 3 mos. to 7 yrs. 3 mos.	6 yrs. 9 mos. to 7 yrs. 9 mos.	7 yrs. 3 mos. to 8 yrs. 3 mos.	7 yrs. 9 mos. to 8 yrs. 9 mos.	8 yrs. 3 mos. to 9 yrs. 3 mos.	8 yrs. 9 mos. to 9 yrs. 9 mos.	9 yrs. 3 mos. to 10 yrs. 3 mos.	9 yrs. 9 mos. to 10 yrs. 9 mos.	10 yrs. 3 mos. to 11 yrs. 3 mos.	10 yrs. 9 mos. to 11 yrs. 9 mos.	11 yrs. 3 to 12 yrs. 3							
		B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G
4½ yrs.	4 yrs. 3 mos. to 4 yrs. 9 mos.																													
5 yrs.	4 yrs. 9 mos. to 5 yrs. 3 mos.																													
5½ yrs.	5 yrs. 3 mos. to 5 yrs. 9 mos.																													
6 yrs.	5 yrs. 9 mos. to 6 yrs. 3 mos.				1																									
6½ yrs.	6 yrs. 3 mos. to 6 yrs. 9 mos.					2		2		1																				
7 yrs.	6 yrs. 9 mos. to 7 yrs. 3 mos.					3		4		1		2																		
7½ yrs.	7 yrs. 3 mos. to 7 yrs. 9 mos.					2		2		7		3																		
8 yrs.	7 yrs. 9 mos. to 8 yrs. 3 mos.					1		2		5		5		5																
8½ yrs.	8 yrs. 3 mos. to 8 yrs. 9 mos.					1		1		6		5		7		2		5												
9 yrs.	8 yrs. 9 mos. to 9 yrs. 3 mos.					2		1		6		4		2		8		4		1										
9½ yrs.	9 yrs. 3 mos. to 9 yrs. 9 mos.					4				4		3		9		5		9		5		3		1						
10 yrs.	9 yrs. 9 mos. to 10 yrs. 3 mos.							3				5		7		3		10		4		2		2						
10½ yrs.	10 yrs. 3 mos. to 10 yrs. 9 mos.					1		1		2		2		1		5		9		3		8		4						
11 yrs.	10 yrs. 9 mos. to 11 yrs. 3 mos.					1				2		2		2		3		13		3		17		7						
11½ yrs.	11 yrs. 3 mos. to 11 yrs. 9 mos.							1				1				1		2		7		12		4						
12 yrs.	11 yrs. 9 mos. to 12 yrs. 3 mos.											1		1		3		5		3		5		9						
12½ yrs.	12 yrs. 3 mos. to 12 yrs. 9 mos.													D		1		[illegible]		8		5		5						
13 yrs.	12 yrs. 9 mos. to 13 yrs. 3 mos.															1		[illegible]		3		5		10						
13½ yrs.	13 yrs. 3 mos. to 13 yrs. 9 mos.													1		2		2		8		3		3						
14 yrs.	13 yrs. 9 mos. to 14 yrs. 3 mos.															1		1		2		1		1						
14½ yrs.	14 yrs. 3 mos. to 14 yrs. 9 mos.															1				1		3		1						
15 yrs.	14 yrs. 9 mos. to 15 yrs. 3 mos.																			1		2		3						
15½ yrs.	15 yrs. 3 mos. to 15 yrs. 9 mos.																													
16 yrs.	15 yrs. 9 mos. to 16 yrs. 3 mos.																	1						2						
16½ yrs.	16 yrs. 3 mos. to 16 yrs. 9 mos.																													
17 yrs.	16 yrs. 9 mos. to 17 yrs. 3 mos.																													
17½ yrs.	17 yrs. 3 mos. to 17 yrs. 9 mos.																													
18 yrs.	17 yrs. 9 mos. to 18 yrs. 3 mos.																													
	Total Number			1	17	17	32	35	35	38	62	44	65	52																	
	Number of normal age children			1	5	9	12	12	9	14	19	7	25	11																
	Number of over-age children				12	6	18	18	21	22	35	31	35	34																
	Number of under-age children					2	2	5	3	2	7	6	5	7																
	Per cent of children of normal age			100	29.4	52.9	37.5	34.3	27.3	36.8	30.6	15.9	38.5	21.2	4															
	Per cent of children over age				70.6	35.3	56.3	51.4	63.6	57.9	56.1	70.5	53.8	65.4	4															
	Per cent of children under age					11.8	6.2	14.3	9.1	6.3	21.3	13.6	7.7	13.4	1															

mentary school children, all elementary school children who had spent all of their school lives in the Hackensack schools, and all elementary school children who at some time or other had transferred from other school systems into the Hackensack school system. These grade-progress studies are shown in Tables XI, XII, and XIII. A summarization of these tables is presented below.

RECORD OF GRADE AND PROGRESS IN SCHOOL

	All Elementary School Children	Elementary School Children Who Have Always Attended Hackensack Schools	All of the Children Who Have Entered the Hackensack School System from Other School Systems
Per cent of children making slow progress, ...	47.5	44.2	57.1
Per cent of children making normal progress, ...	39.5	43.2	28.8
Per cent of children making rapid progress, ...	13.	12.6	14.1

From this summary it is evident that the conclusions drawn from the age-grade study are correct, namely, that those children who have at some time or other attended other school systems, make slower progress than those who have always had the advantage of attending schools in Hackensack. About 57 per cent of the children who have transferred from other school systems make slow progress and only 14 per cent make rapid progress. Where children remain always in the Hackensack schools, only 44 per cent make slow progress, as against the 57 per cent of the other group. It is not surprising to find that the percentage making rapid progress is smaller in the latter case, as the group of children who have transferred from other school systems include a large number of those for whom special provision for rapid progress is being made in the school system through the agency of special classes of various kinds. In one sense the facts of this last summarization may be taken as an indication of the development of a higher standard in the schools

of Hackensack over the standards of other school systems. The conclusion may also be drawn that children tend to progress better under conditions with which they are familiar. The Grade-Progress records for each individual school are shown in tables of the appendix.

FORM 130

FORM XI

School Record of Grade and Progress in School

Bilin System of Elementary Schools Semester Beginning February 1921

PART I

No. of Years in School	1st Grade A*	2nd Grade B*	3rd Grade A*	3rd Grade B*	4th Grade A*	4th Grade B*	5th Grade A*	5th Grade B*	6th Grade A*	6th Grade B*	7th Grade A*	7th Grade B*	8th Grade A*	8th Grade B*	9th Grade A*	9th Grade B*	10th Grade A*	10th Grade B*	11th Grade A*	11th Grade B*	12th Grade A*	Totals
Less than ½ Year																						
½	24	179	2																			205
1	2	47	25	2	2	1																145
1½		19	24	60	28	2																174
2		1	12	48	53	14	4															131
2½			4	16	29	74	21	6		2												151
3		2	1	12	23	26	51	6	5	1					1							128
3½				2	6	26	37	63	16	4	2											178
4		1		1	6	4	26	45	40	10	3	1		1		1						139
4½					1	6	9	29	30	68	14	15	2									160
5			1			5	8	12	17	36	40	9	11	2								137
5½					1	2	1	7	23	25	42	60	27	5	4	1						198
6								2	11	11	25	20	25	17	3	2						118
6½							1	2	4	10	14	21	61	38	51	19						191
7								1	4	5	7	10	12	31	24	6						90
7½									1	5	6	5	17	17	39	27						112
8								1	2		2	2	2	5	11	13						38
8½										1	2	3	5	10	6	17						45
9										1	2		1	2	1	9						16
9½														2		6						10
10																3						3
10½																1						1
11																						
11½																1						1
12																						
12½																						
13																						
13½																						
14 or over																						
Totals*	26	248	130	170	146	120	156	195	150	175	156	145	151	115	121	110						2573
Number making slow progress	26	70	26	60	65	57	60	97	71	90	97	58	86	68	59	51						1187
Number making normal progress		179	95	90	53	74	51	63	40	56	40	60	23	35	24	27						954
Number making rapid progress			2	2	21	17	25	15	19	17	19	25	40	25	38	32						309
Per cent making slow progress	100	28	20	35	44	48	51	50	51	60	62	42	57	49	49	46						47.8
Per cent making normal progress		72	50	61	36	47	33	43	27	39	26	48	17	38	20	25						39.5
Per cent making rapid progress			2	4	21	11	16	7	13	11	13	17	36	19	61	29						13

* Insert section number or letter.

PART II

Children Making Rapid Progress*							Children Making* Normal Progress	Children Making Slow Progress*						
Years	3 or More	2½ Years	2 Years	1½ Years	1 Year	½ Year		½ Year	1 Year	1½ Years	2 Years	2½ Years	3 or More	Total*
Number	L 2	I 1	H 5	P 15	@ D 74	B 234	A 954	C 541	E 290	G 144	I 91	K 56	M 55	2573
Per cent	.12	.08	.1	.8	3.1	9		22.3	12.3	5.08	3.4	1.65	1.48	100

NOTE: This form is for the use of principals in consolidating the records from various classes as listed by the teachers on the form designated record of age and progress (Strayer-Engelhardt Record Card Series No. 131.) *Important.* The perpendicular total should equal the horizontal total No. 1. No. 1 in Part One should equal No. 5 in Part Two. The sum of items 2, 3 and 4 should equal 5. The sum of all the items in the black squares in Part One should equal No. 3 in Part Two. (These are normal in progress). The sum of all the items above the black squares should equal No. 2. (These are rapid in progress). The sum of all the items below the black squares should equal No. 4. (These are slow in progress). The sum of all the items one space above the black squares in Part One should equal B in Part Two. (These are one-half year rapid in progress). The sum of items two spaces above the black squares should equal D, those three spaces above should equal F, etc. Check up these items by half years for spaces below the black squares also, to see that the sums of the figures in the first space below the black squares, the second space below, the third space, etc., equal C, E, G, etc., respectively.

STRAYER-ENGELHARDT SCHOOL RECORD CARD SERIES.—C. F. WILLIAMS & SON, INC., ALBANY, N. Y.

FORM 130

TABLE XII

School Record of Grade and Progress in School

Entire System Elementary Schools Semester Beginning February 1921

(Those not transferred) PART I

No. of Years in School	1st Grade A	2nd Grade B	3rd Grade A	3rd Grade B	4th Grade A	4th Grade B	5th Grade A	5th Grade B	6th Grade A	6th Grade B	7th Grade A	7th Grade B	8th Grade A	8th Grade B	9th Grade A	9th Grade B	10th Grade A	10th Grade B	11th Grade A	12th Grade B	12th Grade A	Totals
Less than ½ Year																						
½	24	178	2																			203
1	1	42	79	5	2	1																130
1½		18	25	81	24	2																147
2		11	44	48	11	2																111
2½		4	6	19	60	20	5		2													116
3			8	18	21	40	6	2														95
3½			1	8	20	29	58	14	6													129
4			1	3	2	16	26	51	9	1					1							90
4½					3	6	20	12	44	9	10	2										112
5					2	5	9	15	20	38	5	10	1									97
5½					2	1	4	19	15	31	33	15	3	2								122
6							5	3	9	11	15	20	12	3	2							81
6½							1	2	7	11	11	29	25	10	13							115
7								2	2	3	6	10	15	20	7							67
7½									1	2	2	10	12	26	19							72
8										2	2	2	5	9	8							28
8½										1	1	1	10	8	10							27
9												1	1	1	6							9
9½															6							6
10															2							2
10½															1							1
11																						
11½															1							1
12																						
12½																						
13																						
13½																						
14 or over																						
Total[1]	26	252	123	146	113	125	118	151	106	110	104	66	100	82	68	76						1752
Number making slow progress	25	56	41	60	44	61	56	63	59	52	61	39	63	45	40	34						777
Number making normal progress		176	79	81	45	60	40	56	51	44	33	52	20	28	20	19						759
Number making rapid progress			5	5	25	14	22	10	16	14	10	15	27	16	23	25						225
Per cent making slow progress	100	24.2	33.6	41.1	39	48.8	47.5	42.1	55.7	47.3	58.7	45.4	65	52.4	43.2	44.8						44.2
Per cent making normal progress		75.8	64.8	55.5	38.1	48	33.9	44.3	25.5	40	31.8	37.2	20	28	24.1	25.1						43.2
Per cent making rapid progress			1.6	3.4	22.9	11.2	18.6	7.6	18	12.7	10.5	17.4	27	19.6	27.730.1							12.8

[1] Insert section number at letter.

PART II

Years	Children Making Rapid Progress[1] 3 or More	2½ Years	2 Years	1½ Years	1 Year	½ Year	Children Making[1] Normal Progress	Children Making Slow Progress[1] ½ Year	1 Year	1½ Years	2 Years	2½ Years	3 or More	Total[1]
	L	J	H	P	D	B	A	C	E	G	I	K	M	
Number	1		2	8	56	156	759	393	194	104	55	18	17	1759
Per cent	.06		.11	.45	3.2	8.8	43.2	22.21	10.91	5.89	3.11	1.02	.96	100

NOTE This form is for the use of principals in consolidating the records from various classes as listed by the teachers on the form designated record of age and progress, (Strayer-Engelhardt Record Card Series No. 131.) *Important.* The perpendicular total should equal the horizontal total No. 1. No. 1 in Part One should equal No. 3 in Part Two. The sum of items 2, 3 and 4 should equal 5. The sum of all the items in the black squares in Part One should equal No. 2 in Part Two. (These are normal in progress). The sum of all the items above the black squares should equal No. 2. (These are rapid in progress). The sum of all the items below the black squares should equal No. 4. (These are slow in progress). The sum of all the items one space above the black squares in Part One should equal 6 in Part Two. (These are one-half year rapid in progress). The sum of items two spaces above the black squares should equal D, those three spaces above should equal F, etc. Check up these items by half years for spaces below the black squares also, to see that the sums of the figures in the first space below the black squares, the second space below, the third space, etc., equal C, E, G, etc., respectively.

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FORM 100

TABLE XIII

School Record of Grade and Progress in School

Entire System Elementary Schools Semester Beginning February 1921

(For Children who have transferred from other school systems) PART I

No. of Years in School	1st Grade B A	2nd Grade B A	3rd Grade B A	4th Grade B A	5th Grade B A	6th Grade B A	7th Grade B A	8th Grade B A	9th Grade B A	10th Grade B A	11th Grade B A	12th Grade B A	Totals
Less than ½ Year		3											3
½	1	8	5	3									18
1½		5	3	9	6								23
2		2	1	4	9	5	2						20
2½				10	10	14	1						35
3		2	1	4	5	6	11	5	1	1		1	36
3½				2	1	5	5	25	2	1	5		47
4		1			5	2	10	19	9	1	2	1	1				69
4½					1	3	4	5	12	24	5	5					56
5			1			1	1	5	5	16	7	4	1	1			40
5½					1			5	5	19	11		18		2	1	78
6								5	6	2	12	5	5	5			37
6½							1	1	2	5	5	10	22	15	13	5	78
7								1	2	1	4	2	2	5	4	1	23
7½									1	2	5	1	7	5	15	5	40
8								1	2					1	2	4	10
8½										1	1	1	2		4	7	16
9										1	2			1		3	7
9½														2		2	4
10																1	1
10½																	
11																	
11½																	
12																	
12½																	
13																	
13½																	
14 or over																	

TOTAL[1]	1	17	17	52	56	53	58	68	44	65	62	57	61	57	58	34	618
Number making slow progress	1	14	11	20	21	15	24	34	33	36	36	15	33	15	19	17	350
Number making normal progress		3	6	9	9	14	11	25	9	24	7	25	8	15	4	6	177
Number making rapid progress				3	5	3	3	3	3	5	9	10	15	7	15	9	84
Per cent making slow progress	100	78	65	65	60	51	65	56	75	59	69	53	56	41	50	50	57.1
Per cent making normal progress		22	35	28	26	40	29	40	21	37	14	49	9	41	11	25	28.6
Per cent making rapid progress				9	14	9	8	5	4	4	17	18	25	18	39	25	14.1

[1] Insert section number or letter.

PART II

Children Making Rapid Progress[1]							Children Making[1] Normal Progress	Children Making Slow Progress[1]						
Years	3 or More	2½ Years	2 Years	1½ Years	1 Year	½ Year		½ Year	1 Year	1½ Years	2 Years	2½ Years	3 or More	Total[2]
Number	L 1	J 1	N 1	F 7	D 18	B 58	A 177	C 148	E 96	G 40	I 27	K 17	M 22	615
Per cent	.1	.1	.1	1.1	2.9	9.5	28.8	24.2	15.7	6.5	4.4	2.9	3.6	100

NOTE. This form is for the use of principals in consolidating the records from various classes as listed by the teachers on the form designated record of age and progress, (Strayer-Engelhardt Record Card Series No. 131.) *Important.* The perpendicular total should equal the horizontal total No. 1. No. 1 in Part One should equal No. 5 in Part Two. The sum of items 2, 3 and 4 should equal 3. The sum of all the items in the black squares in Part One should equal No. 3 in Part Two. (These are normal in progress). The sum of all the items above the black squares should equal No. 2. (These are rapid in progress) The sum of all the items below the black squares should equal No. 4. (These are slow in progress). The sum of all the items one space above the black squares in Part One should equal B in Part Two. (These are one-half year rapid in progress). The sum of items two spaces above the black squares should equal D, these three spaces above should equal F, etc. Check up these items by half years for spaces below the black squares also, to see that the sums of the figures in the first space below the black squares, the second space below, the third space, etc., equal C, E, G, etc., respectively.

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The graphic representations of the conditions found in these last two studies are given in Charts 1 and 2.

Hackensack's teaching staff has been making a very decided effort to adjust the course of study to the needs of children. It is clear from these charts that this effort must be consistently continued, in order to produce a situation which has reduced the number of over-age children and the number of children making slow progress to a normal situation.

CHART No. 1

PROPORTION OF CHILDREN OVER AGE, OF NORMAL AGE, AND UNDER AGE, HACKENSACK ELEMENTARY SCHOOL GRADES —JUNE, 1921

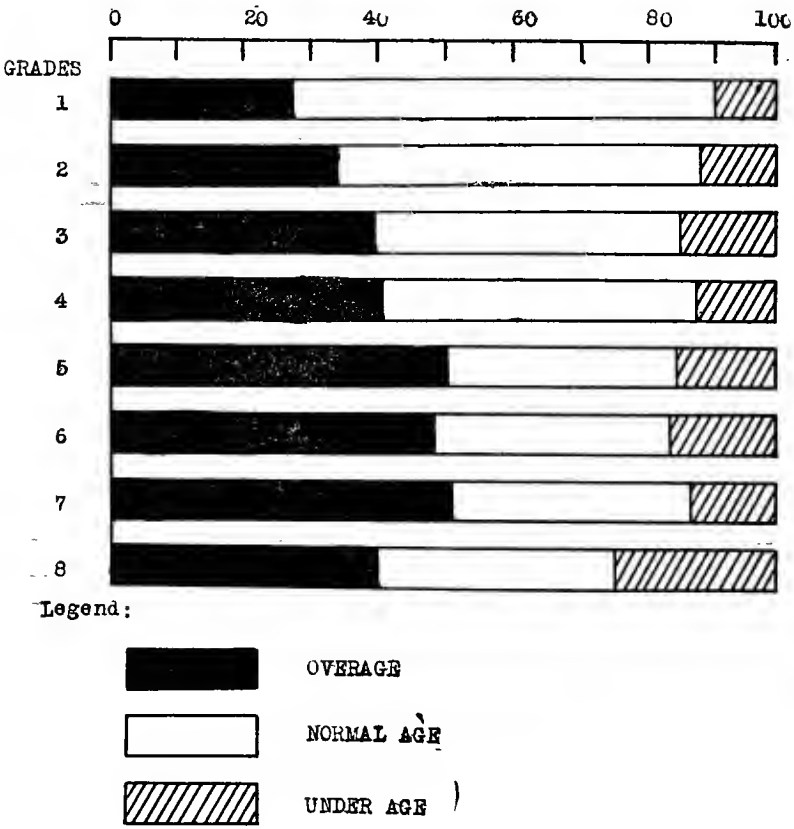
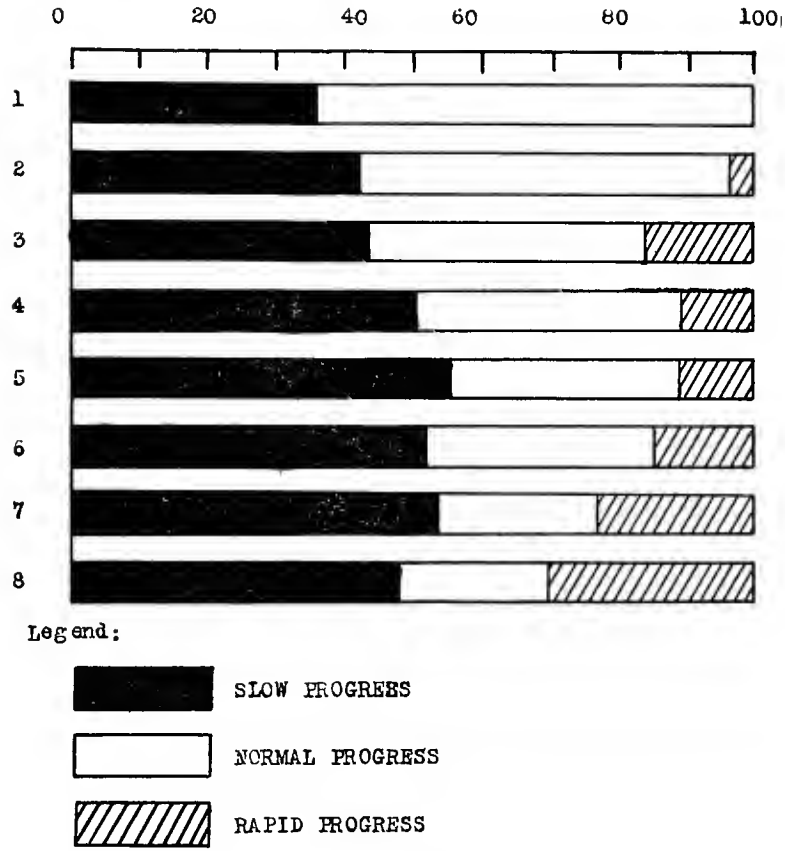


CHART No. 2

PROPORTION OF PUPILS IN HACKENSACK ELEMENTARY SCHOOL GRADES MAKING SLOW, RAPID AND NORMAL PROGRESS—JUNE, 1921



Part of the report required of elementary teachers involves the reasons for non-promotions. Hackensack teachers have reported that the largest percentage of non-promotions is due to mental incapacity. The next largest percentage is due to indifference, and the third largest percentage is due to irregular attendance. The percentages of non-promotions due to the various causes in January, 1921, are shown in Chart 3. It hardly seems just to fail to promote children because of mental in-

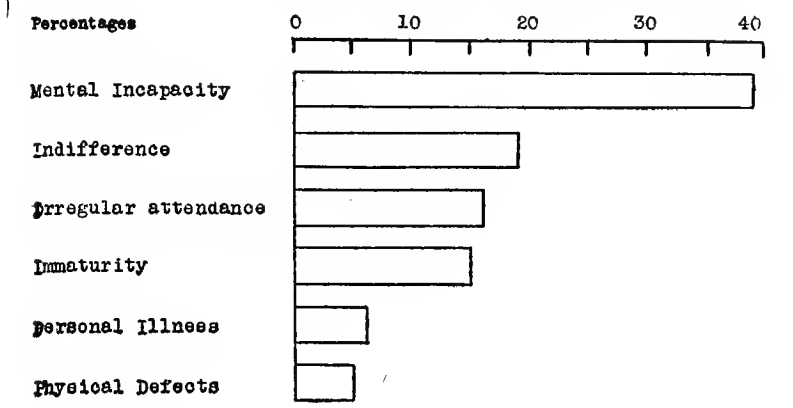
capacity, and yet, approximately 40 per cent of the non-promotions in January 1921 were listed by teachers as due to this cause. The program of the administration has in the past included the adjustment of the curriculum to meet the needs of children unable to satisfy the normal requirements. Apparently, even further adjustment in this direction is needed.

To make such an adjustment most rapidly, it is necessary to apply measures of intelligence, in order to determine the native abilities of children. Such measurements were being made by the administration during the period of the survey. Without doubt, a continuation of the program of measurement of intelligence will bring about a better adjustment for those children who are at present failing because of their mental incapacity. It also seems unfortunate that such a large percentage of children fail because of irregular attendance. Such ought not to be the case in a residential community like Hackensack. This problem can be solved only by maintaining a permanent continuing school census bureau, which studies most carefully the attendance of every child, which assures that children come to school during the early school ages and attend most regularly and do not leave until the law permits, or until they have completed their school program.

The second reason given for non-promotions is indifference of the child. This presents a difficulty which must be solved by the co-operation of the teacher with the home. Indifference of the child towards school work may mean failure of the school to provide the kind of program which meets the child's needs. It may also mean failure on the part of the parents to develop the home discipline in such a way as to supplement the work of the school. Without doubt, stress laid on the solution of the three problems presented by the teachers will help to a large degree in bringing about a situation which will be most satisfactory for the large majority of children in the Hackensack schools.

CHART No. 3

NONPROMOTIONS IN HACKENSACK ELEMENTARY SCHOOLS DUE TO VARIOUS CAUSES—JANUARY, 1921



DOUBLE PROMOTIONS AND NON-PROMOTIONS

In Table XIV are presented the promotions, double promotions and non-promotions for the years 1917-21. The percentage of non-promotions is increased for June, 1920, over the percentage in June, 1917. The percentage of double promotions has, however, remained about constant. It would seem that wherever one has a large group of children, as is found in Hackensack, that the distribution should approximate a normal curve of frequency. In other words, it appears that the program for the promotion of children may be so advanced as to provide as many double promotions as there are non-promotions. This may not always be advisable, because of the physical and social immaturity of children. It would seem, however, advisable to secure a better relationship between double promotions and non-promotions than is found in Table XIV. This program suggests that large groups of children must be housed together in order to provide the greatest flexibility in promotion. Hackensack should not add small school buildings to its school plant, but should endeavor to provide school buildings which will house twenty-four to thirty-two classes, so that a maximum of promotion becomes possible.

TABLE XIV

PERCENTAGE OF PROMOTIONS, DOUBLE-PROMOTIONS AND NON-PROMOTIONS BASED ON NUMBER OF STUDENTS IN EACH GRADE AT END OF TERM—SEMESTERS OF 1917, 1918, 1920 AND 1921

GRADE AND SECTION	JUNE, 1917				JANUARY, 1918				JANUARY, 1920				JUNE, 1920				JANUARY, 1921			
	P	D-P	N-P	Total	P	D-P	N-P	Total	P	D-P	N-P	Total	P	D-P	N-P	Total	P	D-P	N-P	Total
1 B,	86	4	10	.....	80	5	15	.....	83	2	15	.....	72	3	25	.....	90	0	10	....
A,	83	10	7	.....	81	5	14	.....	82	5	13	.....	74	14	12	.....	87	2	11	.....
2 B,	83	6	11	.....	83	8	9	.....	88	1	11	.....	84	6	10	.....	91	5	4	.....
A,	90	2	8	.....	90	4	6	.....	93	1	6	.....	90	2	8	.....	86	6	8	.....
3 B,	86	2	12	.....	81	4	15	.....	88	....	12	.....	84	3	13	.....	87	6	7	.....
A,	90	1	9	.....	86	2	12	.....	92	....	8	.....	94	....	6	.....	93	1	6	.....
4 B,	86	4	10	.....	81	7	12	.....	93	....	7	.....	92	1	7	.....	97	1	2	.....
A,	83	3	14	.....	87	5	8	.....	96	....	4	.....	86	4	10	.....	86	3	11	.....
5 B,	87	2	11	.....	83	....	17	.....	85	3	12	.....	84	1	15	.....	92	....	8	.....
A,	89	5	6	.....	82	1	17	.....	92	2	6	.....	85	1	14	.....	87	....	13	.....
6 B,	90	2	8	.....	83	5	12	.....	93	2	5	.....	86	....	14	.....	78	....	22	.....
A,	90	2	8	.....	79	12	9	.....	95	1	4	.....	94	....	6	.....	87	1	12	.....
7 B,	89	3	8	.....	87	4	9	.....	92	1	7	.....	86	1	13	.....	87	1	12	.....
A,	88	....	12	.....	95	1	4	.....	94	1	5	.....	82	3	15	.....	95	1	4	.....
8 B,	92	....	8	.....	98	....	2	.....	98	1	1	.....	89	....	11	.....	93	....	7	.....
A,	91	....	9	.....	95	....	5	.....	97	....	3	.....	96	....	4	.....	100	....	0	.....
Total No. of Cases, ... B..	993	33	112	1138	1026	52	151	1229	1171	20	128	1319	981	25	165	1171	1247	24	128	1399
A..	1060	37	103	1200	923	39	106	1068	1039	15	72	1126	1082	44	123	1219	996	22	99	1117
Total, ...	2053	70	215	2338	1949	91	257	2297	2210	35	200	2445	2063	69	288	2420	2243	46	227	2516
% of Total No. of Cases, B..	87	3	10	49	84	4	12	54	89	2	9	54	84	2	14	48	89	2	9	56
A..	88	3	9	51	86	4	10	46	93	1	6	46	87	4	9	52	89	2	9	44
Total, ...	88	3	9	100	85	4	11	100	91	1	8	100	85	3	12	100	89	2	9	100

P—Promotion. D-P—Double Promotion. N-P.—Non-Promotion.

WITHDRAWALS FROM SCHOOL

The relation of the number of withdrawals to the total enrollment is always an interesting factor in the diagnosis of the condition of a school system. If the ratio is great, it indicates either a fluctuating population or a failure of the school system to function properly. If the cause of withdrawals is traced to conditions within the school system itself a study of the subject by grades and age groups is the next step in locating the trouble. Though the number of withdrawals may be comparatively small a proper study of the causes and their location is fruitful of suggestions as to points at which improvements may be made and as to the character of the changes required to keep the system up to the highest point of efficiency.

In the office records withdrawals in Hackensack are classified as to cause, but they are not located by either age or grade. The number is not unusually high in either the elementary or high school. About five or six per cent of the enrollment move away each year; one and a half per cent quit school to work; private schools receive one per cent; indifference claims about the same number; while one and a half per cent of the withdrawals have no assigned cause.

Total withdrawals amounted to from 12 to 15 per cent of the total enrollment for the years 1918, 1919 and 1920. A rather significant number of withdrawals from the high school are charged to indifference, or have no cause assigned. This number included 59 pupils during the year 1920; 69 pupils in 1919; and 93 pupils in 1918. No doubt a part of this difficulty lies in the very over-crowded condition of the high school. Another reason for these figures is, no doubt, the failure of complete adjustment of the school curriculum to the needs of all boys and girls. Apparently much effort should be expended in endeavoring to reduce the number of withdrawals from high school by paying individual attention to every withdrawal above what is being done at present.

In 1920, 8.5 per cent of the total enrollment withdrew for causes such as removal from town, death, transfer to private

schools, and the like, over which the school authorities have little or no control. Investigations have shown that students give "financial reasons" as a reason for withdrawal more frequently than conditions justify. This reason is frequently used as a cloak for other reasons such as dislike of teacher, dislike of school subjects, or even the desire to be earning money.

In 1920, of the 649 children who withdrew from the schools 126 withdrew because of illness. In all cases such withdrawals were not permanent, but were re-entered after a prolonged period. The record does not show what percentage of these children became permanent withdrawals. The functioning of the medical department in the reduction of absence, as well as the reduction of withdrawal cases would be the basis for fruitful study. There is no evidence in the figures which are available to show whether the medical department has played an important role in the solution of the attendance problems.

TABLE No. XV

WITHDRAWALS FROM THE HACKENSACK SCHOOLS, 1918-1920

Classified as to Cause

CAUSES	1918			1919			1920		
	Elementary Schools	High School	Per Cent of Enrollment	Elementary Schools	High School	Per Cent of Enrollment	Elementary Schools	High School	Per Cent of Enrollment
Moved out of town, ..	233	13	5.8	198	16	4.6	253	18	5.6
Financial necessity, ...	53	20	1.7	49	22	1.5	40	25	1.3
Indifference, ...	8	18	.6	7	35	.9	15	39	1.1
Discouragement, ...	1	6	.2	2	0	.0	0	0	.0
Illness, ...	67	14	1.9	66	20	1.8	99	27	2.6
Death, ...	12	2	.3	4	2	.1	9	1	.2
Transferred to private schools, ...	36	22	1.3	29	13	.9	35	16	1.0
Other and unknown reasons, ...	48	75	2.9	48	34	1.8	52	20	1.5
Totals, ...	458	170	14.7	403	142	11.6	503	146	13.3
Percentage of total enrollment, ...	10.8	4.0	.....	8.8	3.1	.....	10.5	3.0	.....

THE HIGH SCHOOL SITUATION

That students of high school age in Hackensack are anxious to avail themselves of high grade high school facilities has been quite evident from the very remarkable increase in high school attendance since the erection of the new school plant. In fact, the high school record for doing good work has become so firmly established in the territory surrounding Hackensack that the number of non-resident students has also increased by leaps and bounds. Because of this increase in non-resident students, the high school enrollment has reached the point where even the new school plant is seriously overcrowded. Without doubt, Hackensack profits by drawing the large number of non-resident students into its school. It cannot, however, afford to sacrifice the education of the local children to the advantage of non-residents. The Board of Education has very rightfully placed the cost of tuition for non-residents at the point where all current expenses are met by each individual student.

The program of Hackensack must include, however, the reduction of the number of non-resident high school students until the present high school plant is increased in size. It may be most desirable, when the reduction becomes necessary, to exclude non-residents from the first year of the high school. This automatically will raise the level of the non-resident students who are admitted to the school.

THE RATIO OF HIGH SCHOOL ENROLLMENT TO TOTAL POPULATION

Hackensack compares favorably with the total situation in the United States on the ratio of the high school enrollment to total population. When actual enrollment is considered, the ratio is 5.28 per cent. This, however, includes the non-resident students, the elimination of whom from consideration, makes the ratio 2.97 per cent based on the figures of the school year 1919–1920.

In Table XVI will be found the ratio of high school enrollment to estimated population—15 to 18 years of age—and to total school enrollment. The 2.97 per cent figure for Hacken-

sack compares favorably with the maximum ratio in Table XVI. The ratio of high school population residing in Hackensack to the total school enrollment for the year 1919–1920 is 15.5 per cent. The ratio which the entire high school enrollment bears to the total school enrollment for this same period is 27.6 per cent. The comparison with the facts of Table XVI shows Hackensack in a very favorable light.

TABLE XVI

RATIO OF HIGH SCHOOL ENROLLMENT TO POPULATION,* ETC.

Median	*Maximum*	*Minimum*	
1.87%	3.06%	.71%	Total Population
28.3 %	65.6 %	9.7 %	Est. Pop., 15-18 yrs of age
13.6 %	20.0 %	6.4 %	Total School Enrollment

*High School Enrollments in Large Cities—by Lee Byrne, American School Board Journal, March, 1921.

RAPID INCREASE IN HIGH SCHOOL MEMBERSHIP

Table XVII shows the rapid increase in high school membership from 1916 to the present school year. During that period the number of students has increased 95.5 per cent. The table also shows the growth of the student body in each course of study for the same period. The college preparatory course has drawn approximately 36 per cent of the student body through this entire period. The technical and normal courses have drawn a percentage varying from 17 to 31. The general course has drawn a percentage which also varies very greatly, namely, from 3 to 20. The commercial course has kept a rather consistent percentage of the total school population during the period shown in Table XVII. This rather even distribution of percentages over the six-year period indicates that there is no outstanding course which attracts boys and girls, but that the tendency on the part of the faculty is to spread the student body throughout the offerings of the high school. Probably this tendency is due to the fact that the faculty is making a decided effort to adjust the students to the courses which best fit their needs. The total enrollment is rather evenly divided between boys and girls showing that the high school appeals equally as well to both sexes.

The increase in percentages of the total enrollment who are now included in the 2d, 3d and 4th years of the high school shows that consistent effort is being made to keep children for a longer period in school. Twenty-two per cent of the total high school enrollment were members of the 4th year class during the past year. This is a very high and very satisfactory percentage when it is borne in mind that there are four classes making up the total enrollment.

During the period 1915–1921 the average percentage that different classes were of the total enrollment was as follows:

Freshman class,	43 per cent
Sophomores,	28 per cent
Juniors,	15 per cent
Seniors,	14 per cent

The tendency for the change that appears in this last year shows that the faculty has borne in mind the need for preventing too early withdrawals from the high school group.

TABLE XVII

INCREASES IN ENROLLMENT—HACKENSACK HIGH SCHOOL—DISTRIBUTION BY COURSES, YEARS AND TOTALS

YEARS	COURSES										TOTALS					
	College Preparatory		Technical and Normal		General		Commercial and Clerical		Industrial and Special		Boys	%	Girls	%	Total	%
	B & G	%	B & G	%	B & G	%	B & G	%	B & G	%						
1915–1916—																
1st year,	77	39	54	40	19	39	67	44	.....	.....	100	42	117	40	217	41
2d year,	46	24	32	23	11	23	55	36	.....	.....	66	27	78	27	144	27
3d year,	29	15	16	12	7	14	15	10	.....	.....	30	13	37	13	67	13
4th year,	44	22	35	25	12	24	14	10	.....	.....	45	19	60	20	105	19
Total,	196	37	137	26	49	9	151	28	.....	.....	241	45	292	55	533	.....
1916–1917—																
1st year,	63	35	73	43	9	27	99	58	.....	.....	115	46	129	42	244	44
2d year,	59	33	40	24	9	27	34	28	.....	.....	58	23	84	28	142	26
3d year,	26	14.5	34	20	4	13	24	14	.....	.....	38	16	50	16	88	16
4th year,	33	18.5	23	13	11	33	14	8	.....	.....	37	15	44	14	81	16
Total,	181	32	170	31	33	6	171	31	.....	.....	248	45	307	55	555	.....
1917–1918—																
1st year,	109	43	75	47.5	56	40	101	61	.....	.....	161	51	180	45	341	48
2d year,	71	28	45	28.5	47	33	40	24	.....	.....	86	27	117	29	203	28
3d year,	39	16	21	13.5	22	15	8	5	.....	.....	36	12	54	13	90	12
4th year,	34	13	17	10.5	16	12	16	10	.....	.....	33	10	50	13	83	12
Total,	253	35	158	22	141	20	165	23	.....	.....	316	44	401	56	717	.....
1918–1919—																
1st year,	114	33	97	39	17	68	79	44	41	76	178	44	180	39	358	42
2d year,	114	33	70	28	5	20	65	36	13	24	122	30	145	32	267	31
3d year,	59	17	45	18	2	8	26	14	0	0	65	16	67	15	132	15
4th year,	57	17	38	15	1	4	10	6	0	0	40	10	66	14	106	12
Total,	344	40	250	29	25	3	180	21	54	6	405	47	458	53	863	.....
1919–1920—																
1st year,	124	36	66	41	62	35	98	39	.....	.....	177	38	173	37	350	38
2d year,	105	30	41	26	57	33	86	34	.....	.....	143	30	146	31	289	31
3d year,	74	21.5	35	22	31	18	51	20	.....	.....	102	22	89	19	191	20
4th year,	44	12.5	19	11	25	14	16	7	.....	.....	48	10	56	12	104	11
Total,	347	37	161	17	175	19	251	27	.....	.....	470	50 +	464	50 −	934	.....
1920–1921—																
1st year,	125	33	93	45	44	34	145	47	13	73	210	41	210	40	420	41
2d year,	95	25	35	17	27	20	81	26	4	23	120	23	122	23	242	23
3d year,	65	17	24	11.5	21	16	38	13	1	4	79	15	70	13	149	14
4th year,	92	25	55	21.5	40	30	44	14	0	0	108	21	123	24	231	22
Total,	377	36	207	20	132	12.5	308	29.5	18	2	517	49.7	525	50.3	1042	.....

PERCENTAGE OF THOSE ENTERING RETAINED TO GRADUATE

Studies by Thorndike (1907), Ayres (1909) and Strayer (1911) show a retention to graduation respectively of 29.6 per cent, 25 per cent and 32.5 per cent. Measured by these standards, Hackensack has been doing very well. The percentage retained to graduate from 1918–1921 has increased from 29 per cent to 40 per cent, as shown in Table XVIII.

TABLE XVIII

ENROLLMENT BY CLASSES AND PERCENTAGE RETAINED FOR GRADUATION

1	2	3	4	Total	No. graduated	Percentage in Each Grade				Per Cent Retained to Graduation
						1	2	3	4	
217	144	67	105	533	82	40	27	13	20	1915–1916
244	142	88	81	555	54	44	26	16	14	1916–1917
341	204	90	83	717	71	48	28	13	11	1917–1918
358	267	132	106	863	63	42	31	15	12	1918–1919 29%
350	289	191	104	934	88	38	31	20	11	1919–1920 36%
420	242	149	231	1024	136	41	23	14	22	1920–1921 40%

When children are eliminated from the high school, the largest percentage drops out of the commercial and clerical courses, as shown in Table XIX. Without doubt, this is due to the fact that children find greater possibilities of stepping directly from these distinctly vocational courses into positions in the business field. The three courses which give the largest percentage of elimination are the general, commercial and the industrial. The children who are not equipped or do not desire to take the college preparatory courses naturally tend to take work in either one of these three courses. Those who drop out are very frequently those for whom the provisions in these courses have little attraction. It may be that some are discouraged, some are not attracted by the type of work that is being done and still others are indifferent to the school offerings. It should be possible for all of these types to find the kind of courses and the kind of teaching in high school which will attract them. In other words, it is wise for the Board of Education and the school

authorities to consider the changes which are needed in order to adapt the high school for all normal and industrious adolescent children whatever their abilities or their particular needs are. To be sure, there is every evidence that part of this program of analysis of children's needs and the adaptation of the course of study to children's needs is constantly going on. The splendid work which is being done in the high school can, however, be improved by discovering the points of elimination of children from high school, ascertaining the real reasons why they leave and building a program which will keep all children through the four years of the high school. When Hackensack high school elimination is compared with the elimination in other parts of the country, it is clear that Hackensack's record is a very favorable one, as shown in Table XX.

TABLE XIX

ELIMINATION BY COURSES, CLASSES, AND SEX, 1920–1921

	College Prep.		Technical Normal		General		Commercial Clerical		Industrial		Special		Total
	B	G	B	G	B	G	B	G	B	G	B	G	
Freshman, ...	4	8	9	4	1	4	12	24	3	7	....	....	76
Sophomore, ...	6	3	2	....	2	2	7	3	1	....	....	1	27
Junior, ...	2	3	1	....	1	2	1	2	....	....	....	1	13
Senior, ...	....	....	....	....	....	....	1	1	....	....	....	....	2
Total, ...	12	14	12	4	4	8	21	30	4	7	....	2	118
Per cent of total enrollment, ...	6.9		8	6.9	9.09		19.8		78.8		5.0		11.5

TABLE XX

ELIMINATION FROM HIGH SCHOOLS ON BASIS OF EVERY 100 ENROLLED IN FIRST YEAR

	1st year	*2d year*	*3d year*	*4th year*
North Atlantic,	100	66	47	39
North Central,	100	69	51	43
South Atlantic,	100	65	44	28
South Central,	100	64	43	28
Western,	100	62	45	37
United States,	100	66	48	38
Hackensack,*	100	78	56	40
Pennsylvania,	100	63	48	33
New Jersey,	100	57	45	39
New York,	100	62	37	30
Connecticut,	100	68	49	45
Rhode Island,	100	62	42	36
Massachusetts,	100	67	51	47
Vermont,	100	71	49	47
New Hampshire,	100	72	57	51
Maine,	100	72	58	50

* Seniors of 1920-21 school year.

In Table XXI will be found the number of graduates distributed by courses. This number corresponds proportionately very closely to the total enrollment by courses for the period 1915 to 1920. This is indication that total failures do not fall more frequently in one course than in another, unless it can be proven that elimination from school is in large part due to failures. The number of graduates has increased from 54 in 1916-1917 to 136 in 1920–1921. It is not surprising to find that the percentage of graduates in the normal preparatory course has dropped as this has occurred with frequency throughout the United States. Hackensack is to be commended on the increase in numbers graduating for college entrance.

TABLE XXI

NUMBER OF GRADUATES BY COURSES

	1915–1916			1916–1917			1917–1918			1918–1919			1919–1920		
	B.	G.	T.	B.	G.	T.	B.	G.	T.	B.	G.	T.	B.	G.	T.
College Prep.,	12	12	24	9	9	18	11	18	29	10	19	29	14	20	34
Technical "	6	0	6	6	0	6	4	0	4	15	0	15	10	0	10
Normal "	0	16	16	0	7	7	0	9	9	0	3	3	0	10	10
Commercial,..	8	3	11	1	1	2	5	7	12	1	2	3	7	5	12
Clerical, ...	0	9	9	6	3	9	6	6	12	0	2	2	0	3	3
General, ...	5	11	16	5	7	12	3	2	5	3	8	11	7	12	19
Totals, ...	31	51	82	27	27	54	29	42	71	29	34	63	38	50	88

INCREASE IN NON-RESIDENT STUDENTS

The consistent increase in non-resident students is another measure of the value of the work that is being done by the Hackensack high school. The percentage of non-residents has remained constant with the growth in the high school population during the past three years. In all, 47 per cent of the high school students pay tuition to the Board of Education. Hackensack should feel highly complimented in having the work of the high school so widely recognized as to draw such a large number of outside high school children into its ranks.

TABLE XXII

NON-RESIDENT STUDENT FACTS

Year	*Parents Pay*	*Boards of Education Pay*	*Total*	*Enrollment*	*% of Total*
1918–1919, ...	50	356	406	863	47
1919–1920, ...	26	382	408	934	43.6
1920–1921, ...	24	459	483	1024	47.1

INDIVIDUAL DIFFERENCES IN HIGH SCHOOL STUDENTS

As has been pointed out with respect to elementary school children, the problem of proper classification is one of the most serious problems confronting any school staff. The problem is just as serious for high school students. There should be

made provisions in every high school for the native individual differences in pupils and for their differences in life interests and their differences in their ability to progress. The program provided in the high school should recognize the need for allowing certain children to progress with less rapidity than other children simply because it lies within their nature to do work more slowly. Provision should also be made for allowing other children who can progress rapidly to move on at their high rate of speed at all times. Criticism is frequently leveled at high schools because these differences in abilities, in aptitudes and in children's desires are not fully recognized by parents. The school system which endeavors to meet the problems that are suggested in these individual differences finds that the task is one that can only be completely solved after further years of research and study. Every step in the direction of meeting the individual needs of children means additional costs. Thus the school administrator is confronted with the need for solving a most serious problem and yet with the need for keeping costs at a reasonable figure. That the school teachers in Hackensack have thoroughly recognized this problem is evident from the work which they are doing and from the verbal and written reports which they have made to the Survey Commission. That the problem still needs further consideration is seen from a study of failures by subjects.

In Table XXIII will be found the failures by subjects for the first semester of the school year 1920-1921. This reveals a relatively high mortality in the modern languages and in mathematics. It should be borne in mind that all mathematics is grouped in this table. These failures have been reduced to percentages of the total enrollment although the enrollment figures were affected by elimination in such classes as commercial classes. These percentages of failure should be studied very carefully by subject teachers. Every effort should be made to reduce those that are above 6 to 8 per cent by adjusting the classroom work to the abilities of children, by eliminating children at the beginning through proper tests and placing them in courses which suit their needs and by arousing children to the point where they will endeavor to reduce for themselves the percentage of fail-

ures in their respective classes. It should not be implied that the percentage of failures in Hackensack in these subjects is higher than elsewhere. This is not the case. In fact, Hackensack's percentage of promotions compares very favorably with those of other cities.

TABLE XXIII

FAILURES BY SUBJECTS

	1919-1920		1920-1921	Number Enrolled	Per Cent
	First Semester	Second Semester	First Semester		
Mathematics,	82	70	93	663	14
History,	26	33	39	317	12
Physics,	16	4	8	85	10
Chemistry,	5	4	5	94	6
Biology,	6	9	15	199	8
Elementary Science,	9	4	8	128	7
Total Science,	36	21	36	.....	.....
Physical Training,	60	64	37	.....	.....
Civics,	.....	.....	7	101	7
Music,	.....	20	80	.....	.....
Economics,	4	3	2	51	4
Printing,	.....	1	1	104	1
Industrial Arts,	6	1	8	110	8
Office Practice,	1	1	3	27	13
Domestic Science,	.....	.....	1	31	4
Hygiene,	25	20	2	.....	.....
Commercial Law,	.....	1	4	.....	.....
Mechanical Drawing,	.....	1	1	207	.5
Fine Arts,	4	2	.....	65	0
English,	83	84	57	759	7.5
Latin,	38	32	37	235	16
French,	33	34	38	186	20.5
Spanish,	8	15	30	216	14
Bookkeeping,	17	8	14	123	12
Pen. & Spelling,	23	15	10	102	10
Typewriting,	12	14	19	262	7
Stenography,	18	10	15	198	8

In Table XXIV will be found the total number of children who have been promoted in all subjects at the end of each term and also the total number of children failing in one, two, three, four or five subjects. These facts have also been transmuted into percentages of those on roll at the end of the term who were promoted in all subjects or who failed in one, two, three or more subjects. As the school has grown in numbers, the percentage who have been promoted in all subjects has remained constant,

namely at 68 per cent. There is no great variation in the percentage who have failed in one, two, or more subjects. It is quite clear that there are students who are failing in three, four or five subjects who are misplaced in their high school courses. Concentrated effort on the reduction of this number and in their placement where they can do the class-room work in the subjects which they are being taught will assist in raising the standard of the school.

TABLE XXIV

NUMBER AND PERCENTAGE OF HIGH SCHOOL STUDENTS ON ROLL AT END OF TERM WHO FAILED IN 1, 2, 3, 4, OR 5 SUBJECTS AT THE END OF EACH SEMESTER

Number

	Jan., 1921	June, 1920	Jan., 1920	June, 1919	Jan., 1919	Jan., 1918	June, 1917	Feb., 1917	June, 1916
On roll at end of term,	882	748	762	719	683	539	446	449	436
Promoted in all subjects,	599	481	489	433	474	339	318	317	294
Failing in 1 subject,	161	166	133	133	98	102	74	70	80
Failing in 2 subjects,	72	59	77	84	58	57	30	38	37
Failing in 3 subjects,	33	20	30	38	28	22	18	15	15
Failing in 4 subjects,	9	18	13	21	10	14	5	5	8
Failing in 5 subjects,	4	8	3	10	8	1	....	3	2
Marks deferred because of illness,	12	....	....	....	....	....	....	....	....
Left school near end of term, but marks included,	8	....	....	....	....	....	....	....	....
Work incomplete or unaccounted for,	....	....	17	43	7	....	1	1	....

Percentage

	Jan., 1921	June, 1920	Jan., 1920	June, 1919	Jan., 1919	Jan., 1918	June, 1917	Feb., 1917	June, 1916
Promoted in all subjects,	68	64	64	60	69	63	71	71	67
Failing in 1 subject,	18	22	18	18	14	19	16	15	19
Failing in 2 subjects,	8	8	10	12	8	11	7	9	9
Failing in 3 subjects,	4	3	4	5	4	4	4	3	3
Failing in 4 subjects,	1	2	2	3	2	3	1	1	2
All others,	1	1	2	2	3	0	1	1	0
Total percentage,	100	100	100	100	100	100	100	100	100

THE NUMBER OF PERIODS PER WEEK PER STUDENT

A study of the amount of school time spent by the students in actual recitation and laboratory work shows that on the average 78 per cent is so used. Approximately 5½ periods of each day's 7 periods are so occupied. It is conceivable that a slight reduction in the number of periods spent in recitation and laboratory work might affect the amount of failure and the elimination from school, thus contributing even to a greater degree to the satisfactory program which is being carried out.

THE TEACHING LOAD

In an attempt to improve any high school situation, it is necessary to understand what the teaching load is. Expressed in terms of the total school day, the average teaching load is 70 per cent of the total time. This means that the average teacher has slightly less than five periods daily devoted to actual class-room instruction. The classes, however, in some cases are very large. There is considerable difference in the size of the pupil hour load among the teaching staff and between departments. The standard pupil hour load which has been set by such organizations as the "North Central Association of Colleges and Secondary Schools" should not exceed 800 with an average of about 750 for the school. It is clear that this standard has been borne in mind in the allotment of pupils. Rigid adherence to such a standard will assist the teachers tremendously in carrying forward the program for reduction of failures and the adaptation of curricula to individual needs. Elsewhere in this study the training and experience of the high school teachers have been discussed. It should be borne in mind that the high school teaching staff is a well-trained and highly experienced staff and that these teachers are fully competent to proceed with increasing success in the development of the program which they are now carrying on.

EXTRA-CURRICULAR ACTIVITIES

The high school authorities have encouraged the development of the extra-curricular program for students. The assemblies, the

publications, the organizations and the special classrooms are being utilized in a very satisfactory manner for the development of the social life of the student body. From the replies given by teachers to a questionnaire, it is clear that very extensive efforts were being expended in promoting the welfare of the student body through these extra activities which are now considered to be one of the most important features of high school life. The continuation of this program, with definite assignments for all teachers in some field of work which is closely allied with their subject matter field, is recommended.

PERCENTAGE OF GRADUATES WHO ATTEND COLLEGE

Hackensack again excels in the percentage of graduates who attend college or some other higher educational institution. Over 50 per cent of the class graduated in 1919 and 48 per cent of the class of 1920 are recorded as having continued their educational program beyond the high school. Not only has Hackensack sent a large percentage into college, but from letters written by the authorities of those schools and colleges to which Hackensack graduates have gone, it is clear that Hackensack graduates are able to do work in higher institutions of an exceedingly satisfactory nature. Letters from such institutions as Pratt Institute, Smith College, Sargent School for Physical Education, United States Military Academy, Pine Manor, Massachusetts Institute of Technology, Dana Hall, New York University, Stevens Institute of Technology, Syracuse, Pennsylvania State College, Connecticut College, Simmons College, Cornell University, New Jersey College for Women, Lafayette, Brooklyn Polytechnic Institute, Montclair State Normal School, Mt. Holyoke, Vassar, Brown University, Wilson College, General Electric Co. and the New Haven Normal School of Gymnastics, bear out this conclusion. Some of this positive favorable comment concerning the preparatory work done in Hackensack is found in the following extracts: Pratt Institute, "thoroughly satisfactory order"—Cornell, "no hesitancy"—"School is a good one in which to prepare for college"—Simmons, "entirely satisfactory"—Vassar, "entirely creditable"—Brown, "no question regarding satisfactory preparation."

The Teaching Staff
The Quality of Instruction
The Course of Study

CONTENTS

	Page.
The Size of Staff,	171
The Payment of Teachers,	172
Experience of Teachers,	181
Salaries Paid Teachers in Hackensack and in Other Cities,	186
The Age of Teachers in Hackensack,	187
The Professional Status of the Teaching Staff and the Quality of Instruction,	189
The Sources of Teacher Supply,	189
The Quality of Instruction,	200
Outline for Judging Quality of Instruction,	201
Personality of Teachers,	202
The Kinds of Teaching,	203
Teaching Methods and Teaching Control Observed in Visiting the Hackensack Schools,	204
The Course of Study,	204
The Measurement of the Success of the Course of Study Program,	206
Supervision,	207
The Educational Program,	207
The Educational Program,	207
Industrial Arts Department,	209
Recommendations,	211

TABLES.

Table.	Page.
I. Number of Teachers Employed in the Hackensack Public Schools,	171
II. Distribution of Salaries and Years of Training Beyond Grade Eight of Hackensack Elementary School Teachers,	174
III. Distribution of Salaries and Years of Experience of Hackensack Elementary School Teachers,	176
IV. Distribution of Salaries and Years of Training Above Grade 8 of Women High School Teachers,	176
V. Distribution of Salaries and Experience of Women High School Teachers,	178
VI. Distribution of Salaries and Years of Training Above Grade 8 of Hackensack Men Teachers,	178
VII. Distribution of Salaries and Total Years of Experience of Hackensack Men Teachers,	179
VIII. Comparison of Salaries of Training Beyond the Eighth Grade of Hackensack and Groups of Cities in the United States,	179
IX. Comparison of the Teaching Experience of Teachers in Hackensack and in Cities of the United States,	181
X. Distribution of Experience of Women Elementary School Teachers in Hackensack and Other School Systems,	183

TABLE. PAGE.
XI. Comparison of Salaries of Hackensack Teachers (1919-1920) and (1920-1921) with Salaries in other Jersey Cities (1919-1920) and New York City (1919-1920), ... 187
XII. Distribution of Teachers in Hackensack by Age Groups and Departments, ... 188
XIII. The Institutions of Teacher Training which are Represented by Two Members or More of the Present Teaching Staff—June, 1921, ... 190
XIV. Degrees and Diplomas Held by the Teaching Staff of Hackensack, 190
XV. Size of Classes, ... 197
XVI. Data Covering the Cost of Living of Teachers in Hackensack, 1921, ... 199

CHARTS.

CHART. PAGE.
1. Distribution of Years of Training Above Grade Eight of Hackensack School Teachers—June, 1921, ... 175
2. Distribution of Salaries of Hackensack Women High School Teachers—June, 1921, ... 177
3. Distribution of Salaries of Hackensack Men Teachers—June, 1921, 180
4. Distribution of Salaries of Hackensack Elementary School Teachers, 180
5. Distribution of Years of Experience of Hackensack Elementary School Teachers—June, 1921, ... 182
6. Distribution of Years of Experience of Hackensack Women High School Teachers—June, 1921, ... 184
7. Distribution of Years of Experience of Hackensack Men Teachers—June, 1921, ... 185
8. Hackensack Median Size Classes Compared with Median Size Classes of 429 Other Cities—June, 1921, ... 198
9. Outline of Educational Program of Hackensack Public Schools, ... 209

The Teaching Staff of Hackensack

THE SIZE OF STAFF

In the Hackensack public schools are employed 159 women and 30 men. In addition to this group, 10 women and 4 men are employed in the summer schools. The positions which all of these members of the staff occupy are indicated in Table I.

TABLE I.

NUMBER OF TEACHERS EMPLOYED IN THE HACKENSACK PUBLIC SCHOOLS

	Men	*Women*
Supervising Principal,	1	..
Non-Teaching Principals,	2	4
Special Supervisors,	1	2
Total—Supervisors,	4	6
Teachers—Day Schools		
Kindergarten,	..	10
Grades 1 to 4 inclusive,	..	47
Grades 5 to 8 inclusive,	..	21
Junior High School Grades, 7 to 8 inclusive,	4	15
High School, 9 to 12 inclusive,	11	29
Short Term,	..	1
Substitute,	..	1
Teacher Clerks,	..	4
Sub-normal Classes,	..	5
Special (not included above),	..	1
Total—Day School Teachers,	15	134
Manual Training, Day,	6	5
Vocational, Evening,	1	2
Evening School,	3	5
Evening Schools for Foreign Born,	..	2
Total—Man. Tr., Voc. and Eve.	10	14
Continuation Schools—Full Time,	..	2
Continuation Schools—Part Time,	1	3
Total—Continuation Schools,	1	5
Grand Totals—All Teachers,	*30*	*159*
Summer School,	4	10

One of the measures of the efficiency of a school system is its ability to retain the members of its teaching staff. If large numbers of new teachers are being hired each year into the school system, it results in a constant change in the attitude of the teaching staff to their teaching problems, except at the cost of a maximum of supervision and a lack of continuity in the school program which is quite undesirable. Stability in a school system is just as requisite for success as in any other organization. Constant change of those participating in administration or in teaching means a lack of familiarity with the local school problems, with the needs of individual pupils, and hence the expenditure of funds without adequate returns. Hackensack, because of its suburban relationship to large metropolitan centers, occupies a strategic point for capable teachers who are desirous of coming from the hinterland into the school systems of New York City, Newark, Jersey City, Yonkers and the like. Teachers preparing for entrance into these large city school systems, which offer many advantages to teachers which are not found in the smaller communities, look upon Hackensack and other smaller communities in New Jersey as a station on the route to these ultimate goals. Because of the residential character of the Hackensack community, Hackensack becomes a much more desirable community for these teachers than some of the other communities in northern New Jersey. The need, therefore, has developed in Hackensack of creating a salary schedule which will attract teachers into the local school system and which will hold them in this school system over a long period of years. In other words, in order to compete with the larger metropolitan centers, Hackensack has found it necessary to develop a salary schedule which approaches what is being paid in these larger cities, and therefore is in excess of what is being paid in other communities of the size of Hackensack and more remotely located from metropolitan centers.

THE PAYMENT OF TEACHERS

A number of tables have been made showing the relationship between salaries paid teachers and the years of training which they have secured beyond the 8th Grade, as well as between the

years of experience and the salaries paid. The titles of these tables are as follows:

Table II.—Distribution of Salaries and Years of Training Beyond Grade 8 of the Hackensack Elementary School Teachers.

Table III.—Distribution of Salaries and Years of Experience of Hackensack Elementary School Teachers.

Table IV.—Distribution of Salaries and Years of Training Above Grade 8 of Women High School Teachers.

Table V.—Distribution of Salaries and Experience of Women High School Teachers.

Table VI.—Distribution of Salaries and Years of Training Above Grade 8 of Hackensack Men Teachers.

Table VII.—Distribution of Salaries and Years of Experience of Hackensack's Men Teachers.

In the case of Tables II, III and IV involving elementary school teachers, there were sufficient numbers of teachers to secure a coefficient of correlation in each instance. The correlation of salary and years of training above the 8th grade is —.046 showing no correlation between salary and years of training. In this respect Hackensack's situation is similar to that found by Dr. Evenden in 1919 for the United States.* In other words, the number of years of training above the 8th Grade are yet to be considered as significant elements in the development of a salary schedule.

There is a very high positive correlation between teachers' salaries and years of experience in teaching when the elementary school teachers alone are considered. This correlation in Hackensack is +.69. This correlation compares very favorably with that found by Dr. Evenden in the study mentioned above, which included the majority of cities in the United States. In other words, Hackensack in its payment of salaries for elementary school teachers recognizes to a very great degree the value to be derived from experience. This is highly commendable because it causes teachers to look forward to an extended career with increasing returns as teachers mature in the service. Such a recognition of the needs for creating stability in the teaching profession is highly commendable and will continue to bring good results to the Hackensack school system.

*Teachers' Salaries and Schedules—by E. S. Evenden, Teachers College, Columbia University, N. Y. C.

The median number of years of training beyond the 8th Grade for teachers in each one of the teaching groups in Hackensack is shown in the following tables. The median elementary teacher in Hackensack has had more training than the median elementary teacher in any of the groups shown in Table VI.

The men high school teachers of Hackensack offer more training in return for the salary which is paid them than is offered by the majority of teachers in the other cities included in the tabulation, and it will also be seen that the women high school teachers offer as much training as similar teachers in other cities. Apparently every effort is being made to secure for Hackensack the trained teachers that are necessary in order to secure success in the school work.

TABLE II

DISTRIBUTION OF SALARIES AND YEARS OF TRAINING BEYOND GRADE 8 OF HACKENSACK ELEMENTARY SCHOOL TEACHERS

(June, 1921)

Years of Training	SALARIES										
	$1100	$1200	$1300	$1400	$1500	$1600	$1700	$1800	$1900	Total	%
9—9.99, ...	.....	.....	.....	2	.....	.....	.....	.....	.....	2	2.4
8—8.99, ...	.....	2	1	3	1	.....	.....	.....	.....	7	8.5
7, ...	.....	5	4	4	1	1	.....	.....	1	16	19.2
6, ...	7	17	7	7	1	.....	.....	.....	.....	39	46.9
5, ...	.....	2	2	6	2	.....	.....	.....	.....	12	14.5
4, ...	.....	1	2	1	2	.....	.....	.....	.....	6	7.3
3—3.99, ...	.....	.....	.....	1	.....	.....	.....	.....	.....	1	1.2
Total, ...	7	27	16	24	7	1	0	0	1	83	.....
Per Cent, ..	8.5	32.5	19.3	28.8	8.5	1.2	0	0	1.2	.....	.....

Median Salary, ... $1347
Computed Median Years Training Beyond Grade 8, ... 6.6
Correlation of Salary and Years of Training Above Grade 8, —.046

CHART No. 1

DISTRIBUTION OF YEARS OF TRAINING ABOVE GRADE 8 OF HACKENSACK SCHOOL TEACHERS—JUNE, 1921

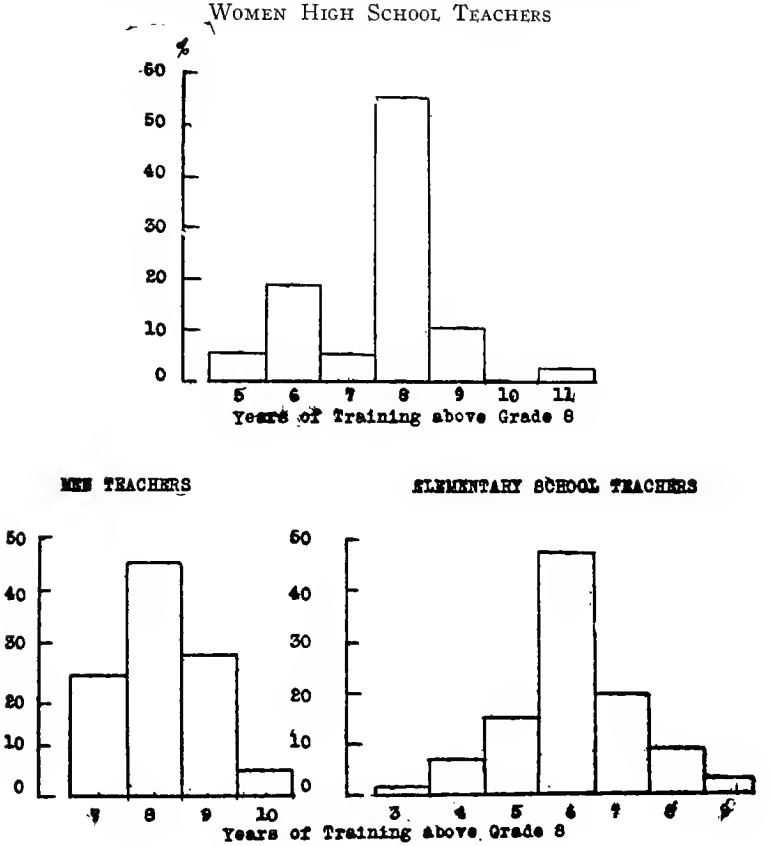


TABLE III

DISTRIBUTION OF SALARIES AND YEARS OF EXPERIENCE OF HACKENSACK ELEMENTARY SCHOOL TEACHERS

(June, 1921)

Years of Experience	SALARIES										
	$1100	$1200	$1300	$1400	$1500	$1600	$1700	$1800	$1900	Total	%
20 & more,	.....	.....	5	5	3	1	.....	.....	.....	14	16.9
15—19,	.....	1	.....	5	.....	.....	.....	.....	.....	6	7.2
11—14,	.....	2	1	6	2	.....	.....	.....	1	12	14.5
10,	.....	.....	.....	1	.....	.....	.....	.....	.....	1	1.2
9,	.....	.....	2	1	1	.....	.....	.....	.....	4	4.8
8,	.....	2	.....	2	.....	.....	.....	.....	.....	4	4.8
7,	.....	1	2	3	.....	.....	.....	.....	.....	6	7.3
6,	.....	.....	.....	1	1	.....	.....	.....	.....	2	2.4
5,	.....	2	4	.....	.....	.....	.....	.....	.....	6	7.2
4,	.....	5	.....	.....	.....	.....	.....	.....	.....	5	6.0
3,	.....	8	.....	.....	.....	.....	.....	.....	.....	8	9.6
2,	1	5	2	.....	.....	.....	.....	.....	.....	8	9.6
1,	4	1	.....	.....	.....	.....	.....	.....	.....	5	6.1
Less than 1,	2	.....	.....	.....	.....	.....	.....	.....	.....	2	2.4
Total, ...	7	27	16	24	7	1	0	0	1	83	.....
Per Cent, ..	8.5	32.5	19.3	28.8	8.5	1.2	0	0	1.2	.....	.....

Median Salary, ... $1347
Median Years of Experience, ... 7.9
Coefficient of Correlation, ... +.693

TABLE IV

DISTRIBUTION OF SALARIES AND YEARS OF TRAINING ABOVE GRADE 8 OF WOMEN HIGH SCHOOL TEACHERS

(June, 1921)

Years of Training	SALARIES									
	$1400	$1500	$1600	$1700	$1800	$1900	$2000	$2100	$2200	Total	%
11,	.....	.....	.....	1	.....	.....	.....	.....	.....	1	2.8
10,	.....	.....	.....	.....	.....	.....	.....	.....	.....	0	0.
9,	.....	.....	2	.....	2	.....	.....	.....	.....	4	11.2
8,	2	5	7	2	3	.....	.....	.....	1	20	55.7
7,	.....	1	1	.....	.....	.....	.....	.....	.....	2	5.7
6,	2	.....	2	1	1	.....	.....	1	.....	7	18.9
5,	.....	.....	1	.....	.....	.....	.....	1	.....	2	5.7
Total, ...	4	6	13	4	6	.....	.....	2	1	36	.....
Per Cent, ..	11.1	16.7	36.2	11.1	16.7	0	0	5.6	2.8	.....	.....

Median Salary, ... $1662
Computed Median Years of Training. .....

CHART No. 2

DISTRIBUTION OF SALARIES OF HACKENSACK WOMEN HIGH SCHOOL TEACHERS—JUNE, 1921

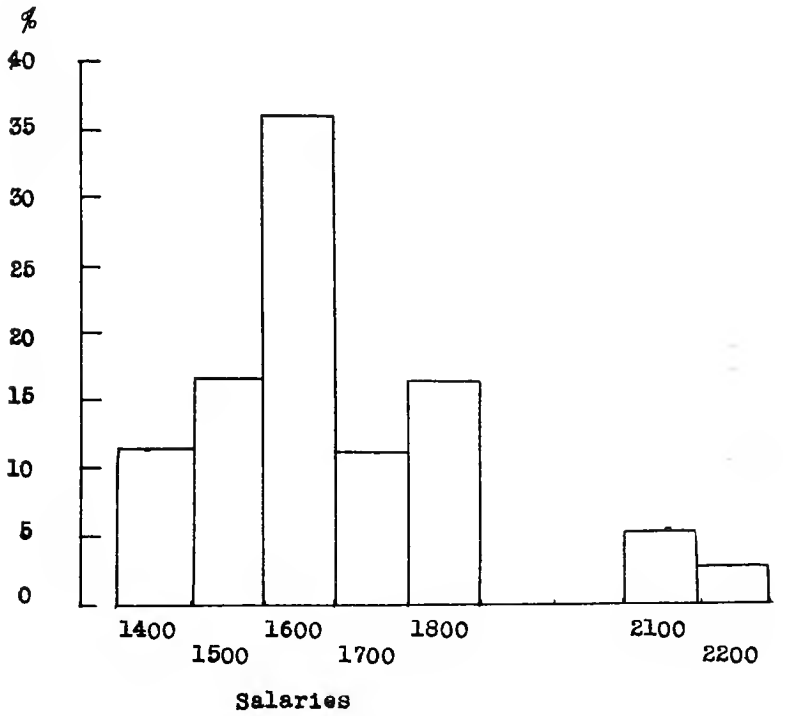


TABLE V

DISTRIBUTION OF SALARIES AND EXPERIENCE OF WOMEN HIGH SCHOOL TEACHERS

(June, 1921)

Years of Experience	SALARIES										
	$1400	$1500	$1600	$1700	$1800	$1900	$2000	$2100	$2200	Total	%
20 to 25, ...	.....	.....	1	1	1	.....	.....	.....	.....	3	8.3
15 to 19, ...	.....	.....	2	.....	1	.....	.....	.....	1	4	11.1
11 to 14, ...	1	.....	1	2	1	.....	.....	.....	.....	5	13.9
10, ...	.....	1	.....	1	1	.....	.....	.....	.....	3	8.3
9, ...	.....	.....	1	.....	.....	.....	.....	.....	.....	1	2.8
8, ...	.....	2	1	.....	1	.....	.....	1	.....	5	13.9
7, ...	2	1	.....	.....	.....	.....	.....	1	.....	4	11.1
6.	.....	1	1	.....	.....	.....	.....	.....	.....	2	5.6
5, ...	.....	.....	2	.....	1	.....	.....	.....	.....	3	8.3
4, ...	.....	1	1	.....	.....	.....	.....	.....	.....	2	5.6
3, ...	1	.....	.....	.....	.....	.....	.....	.....	.....	1	2.8
2, ...	.....	.....	1	.....	.....	.....	.....	.....	.....	1	2.8
1, ...	.....	.....	1	.....	.....	.....	.....	.....	.....	1	2.8
Less than 1,	.....	.....	1	.....	.....	.....	.....	.....	.....	1	2.8
Total, ...	4	6	13	4	6	0	0	2	1	36	.....
Per Cent, ..	11.1	16.7	36.2	11.1	16.7	0	0	5.6	2 8	.....	.....

Computed Median Salary, ... $1662
Computed Median Years Experience, ... 8.6

TABLE VI

DISTRIBUTION OF SALARIES AND YEARS OF TRAINING ABOVE GRADE 8 OF HACKENSACK MEN TEACHERS*—JUNE, 1921

Salaries

YEARS OF TRAINING	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500 to 2999	3000 to 3999	4000 & above	Total	Per Cent
10, ...	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	4.5
9, ...	....	....	1	....	....	....	2	....	1	....	1	1	....	....	6	27.3
8, ...	....	1	....	2	1	....	1	2	....	....	....	1	2	....	10	45.5
7, ...	1	....	....	....	1	....	1	....	1	....	1	....	....	....	5	22.7
0—7, ...	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total, ...	1	1	1	2	2	0	4	2	2	0	2	2	2	1	22	....
Per Cent, ...	4.5	4.5	4.5	9.1	9.1	0	18.2	9.1	9.1	0	9.1	9.1	9.1	4.5	....	....

Median Years Training, ... 8.6
Median Salary, ... $2100

* Includes administrative officers.

TABLE VII

DISTRIBUTION OF SALARIES AND TOTAL YEARS OF EXPERIENCE OF HACKENSACK MEN TEACHERS

(June, 1921)

Salaries

YEARS OF EXPERIENCE	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500 to 2999	3000 to 3999	4000 & above	Total	Per Cent
25 and over,	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	4.5
20—24.99,	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	4.5
15—19.99,	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	4.5
14,	....	....	....	....	....	....	....	1	....	....	....	....	....	....	1	4.5
13,	....	....	....	....	....	....	....	....	....	....	1	1	....	....	2	9.1
12,	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	4.5
11,	....	....	....	....	....	....	....	....	....	....	....	1	....	....	1	4.5
10,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0	0
9,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0	0
8,	....	....	....	....	....	....	1	....	1	....	....	....	....	....	2	9.1
7,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0	0
6,	1	....	....	....	....	....	1	....	....	....	....	....	....	....	2	9.1
5,	....	....	....	....	....	....	1	....	....	....	....	....	....	....	1	4.5
4,	....	....	....	....	1	....	1	....	....	....	....	....	....	....	2	9.1
3,	....	....	....	1	1	....	....	1	1	....	....	....	....	....	4	18.2
2,	....	1	1	1	....	....	....	....	....	....	....	....	....	....	3	13.7
1,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
0,	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total,	1	1	1	2	2	0	4	2	2	0	2	2	2	1	22	....
Per Cent,	4.5	4.5	4.5	9.1	9.1	0	18.2	9.1	9.1	0	9.1	9.1	9.1	4.5	....	....

Median Salary, ... $2100
Median Years Experience, ... 6.75

TABLE VIII

COMPARISON OF YEARS OF TRAINING BEYOND THE 8TH GRADE OF HACKENSACK AND GROUPS OF CITIES IN THE UNITED STATES*

Median Number of Years of Training Beyond the 8th Grade	Hackensack	Cities with Population of 8,000 to 30,000	Cities with Population of 30,000 to 100,000	Cities with Population of 100,000 or more
Elementary Teachers, ...	6.6	6.2	6.3	6.4
High School Women Teachers, ...	8.4	8.4	8.5	8.4
High School Men Teachers, ...	8.6	8.4	8.4	8.4

* Data from "Teachers Salaries and Schedules," by E. S. Evenden, Teachers College, Columbia University, N. Y. C.

CHART No. 3

DISTRIBUTION OF SALARIES OF HACKENSACK MEN TEACHERS
JUNE, 1921

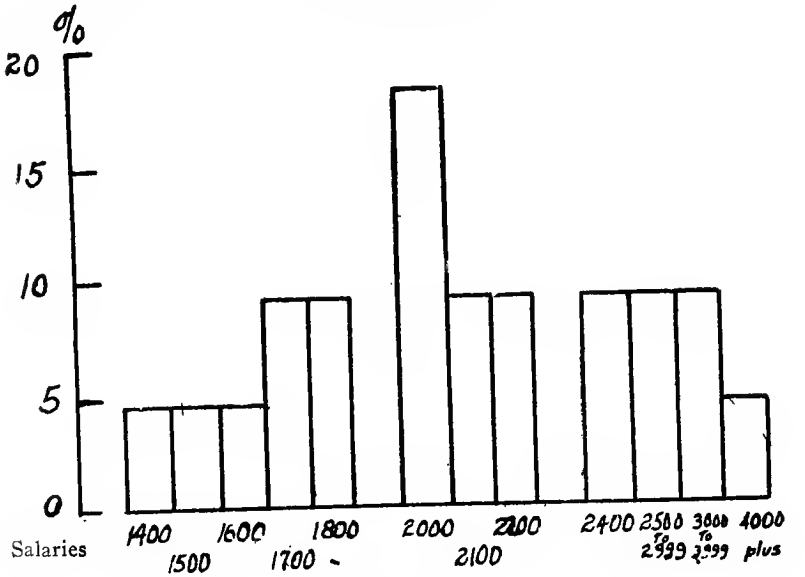
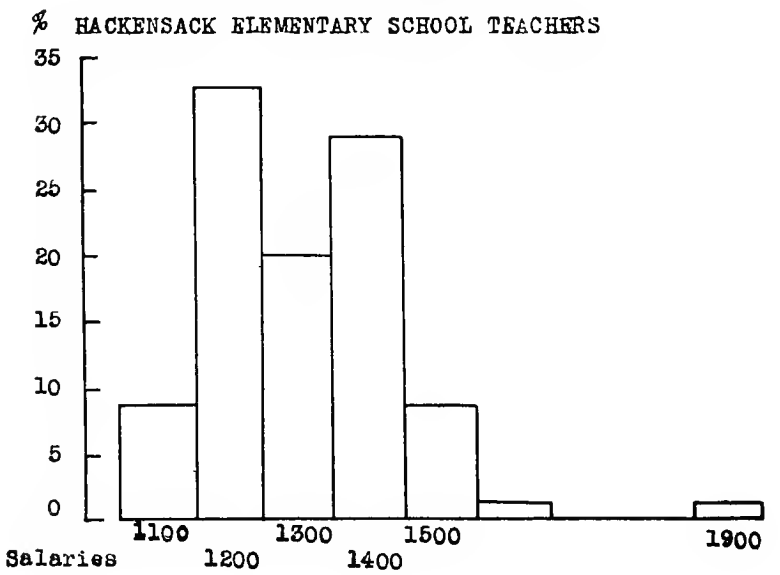


Chart #4

DISTRIBUTION OF SALARIES OF



EXPERIENCE OF TEACHERS

When Hackensack's teachers are compared on the basis of experience with those of other cities, as in Table IX, the elementary teachers offer less experience than teachers in other cities of the same size. The high school women teachers offer more experience than teachers in similar cities and the high school men teachers offer approximately the same number of years of teaching experience. The difference in the elementary group is only slight and may again be due to the fact that teachers withdraw readily from Hackensack in order to go into the larger school systems in the immediate vicinity. Teachers who have had experience in other school systems and under varied types of supervision are much more desirable for a school system than those who come directly from a normal school without experience elsewhere. Without doubt, the skill, maturity and high attitude toward teaching, gained from actual experience in the classroom, are desirable assets to be secured by any school system.

In Table X is shown the relationship between years of experience in Hackensack on the part of 83 elementary teachers and experience elsewhere. It will be seen that 24 of the 83 teachers, or less than one-third, have entered the local school system without experience in other school systems. The median teacher of the 83 has offered practically three years experience elsewhere before coming into the Hackensack schools. The median teacher has also had 3.6 years experience in Hackensack.

TABLE IX

COMPARISON OF THE TEACHING EXPERIENCE OF TEACHERS IN HACKENSACK AND IN CITIES OF THE UNITED STATES*

Median Number of Years of Experience in Teaching	Hackensack	Cities with Population of 8,000 to 30,000	Cities with Population of 30,000 to 100,000	Cities with Population of 100,000 or more
Elementary Teachers, ...	7.9	8.19	9.16	10.44
High School Women Teachers, ...	8.6	7.4	9.7	11.
High School Men Teachers, ...	6.75	6.9	8.8	10.8

* Data taken from "Know and Help Your Schools, Salary Inquiry (1920)," by the National Committee for Chamber of Commerce Co-operation with the Public Schools, Tril

CHART No. 5

DISTRIBUTION OF YEARS OF EXPERIENCE OF HACKENSACK ELEMENTARY SCHOOL TEACHERS—JUNE, 1921

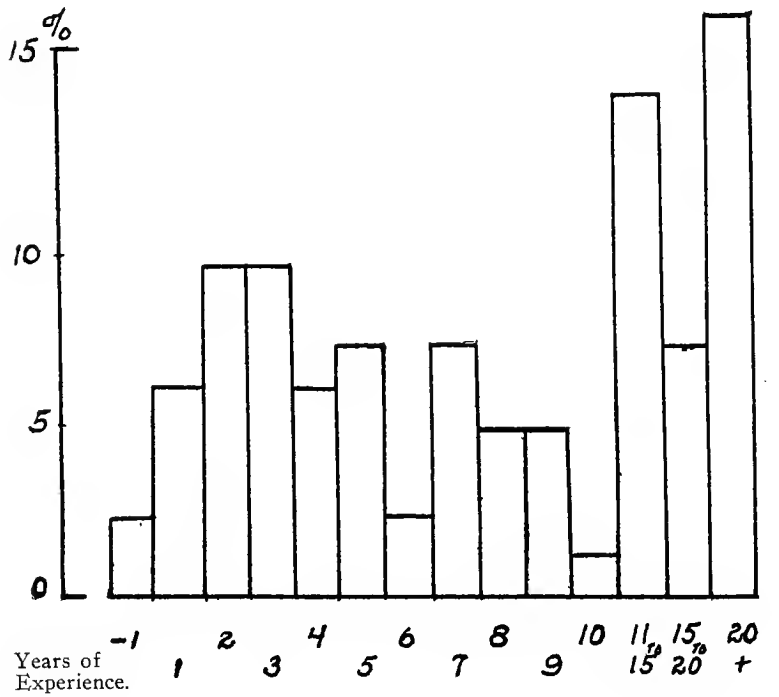


TABLE X

DISTRIBUTION OF EXPERIENCE OF WOMEN ELEMENTARY SCHOOL TEACHERS IN HACKENSACK AND OTHER SCHOOL SYSTEMS.

YEARS OF EXPERIENCE ELSEWHERE	YEARS OF EXPERIENCE IN HACKENSACK														Total Number	Per Cent
	0–.99	1–1.99	2–2.99	3–3.99	4–4.99	5–5.99	6–6.99	7–7.99	8–8.99	9–9.99	10–10.99	11–14.99	15–19.99	20 & more		
20 and more,	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
15–19.99,	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2	2.4
11–14.99,	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	1	1	.....	4	4.8
10–10.99,	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1.2
9–9.99,	.....	.....	.....	1	.....	.....	.....	1	.....	.....	.....	.....	1	1	4	4.8
8–8.99,	.....	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2	2.4
7–7.99,	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1.2
6–6.99,	.....	2	.....	.....	.....	.....	.....	1	.....	1	.....	.....	.....	.....	4	4.8
5–5.99,	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....	2	1	1	6	7.2
4–4.99,	.....	1	1	2	.....	1	.....	1	.....	.....	.....	.....	.....	.....	6	7.2
3–3.99,	2	3	2	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	9	10.8
2–2.99,	.....	3	2	1	.....	1	2	.....	.....	.....	.....	.....	2	.....	11	13.2
1–1.99,	.....	6	1	.....	.....	.....	.....	1	.....	.....	.....	1	.....	.....	9	10.8
0–.99,	2	5	2	3	.....	1	1	1	.....	1	1	2	1	4	24	28.8
Total,	4	25	8	7	0	5	6	5	0	3	1	7	6	6	83	.....
Per Cent,	4.8	30.0	9.6	8.4	0	6.0	7.2	6.0	0	3.6	1.2	8.4	7.2	7.2	.....	.....

Experience in Hackensack—Median, ... 3.642
1 Quartile, ... 1.67
3 " 9.75

Experience Elsewhere—Median, ... 2.772
1 Quartile, ... .864
3 " 5.541

CHART No. 6

DISTRIBUTION OF YEARS OF EXPERIENCE OF HACKENSACK WOMEN HIGH SCHOOL TEACHERS—JUNE, 1921

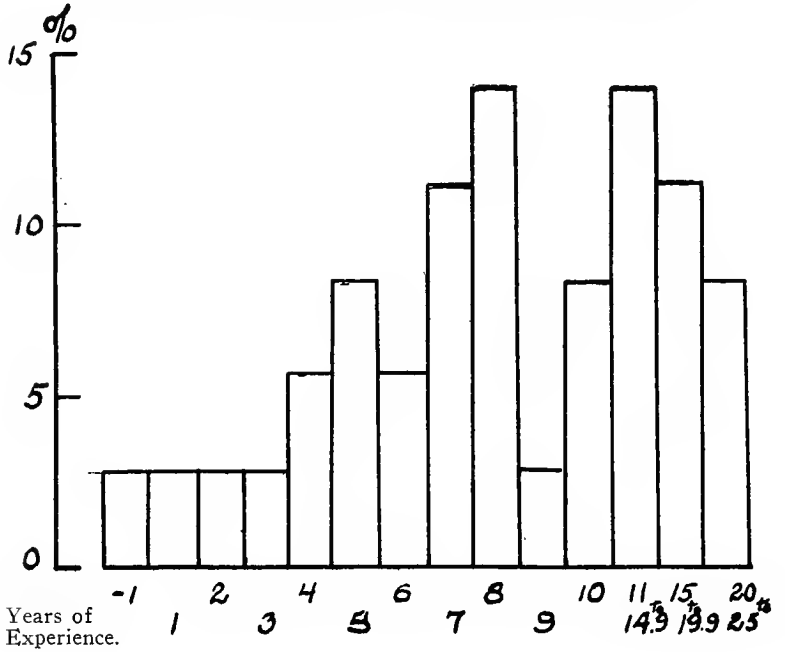
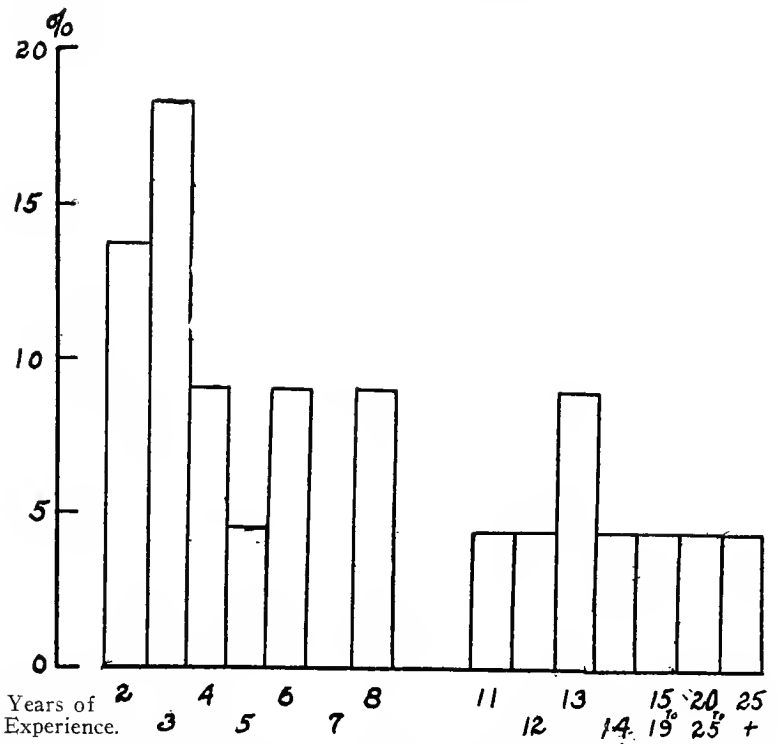


CHART No. 7

DISTRIBUTION OF YEARS OF EXPERIENCE OF HACKENSACK MEN TEACHERS—JUNE, 1921



The median high school woman teacher has had three years' experience in Hackensack and five years' experience elsewhere. The median junior high school teacher has had 7.5 years' experience in Hackensack and 6.5 years' experience elsewhere, indicating that the more experienced teachers have been placed in the junior high school.

The median man teacher in the Hackensack schools has had 2.75 years' experience in Hackensack and 3.5 years' experience elsewhere.

This distribution of experience for these various groups of teachers is highly commendable and should be gratifying to the patrons of the schools, since only through such varied experience can success be achieved.

SALARIES PAID TEACHERS IN HACKENSACK AND IN OTHER CITIES

In Table XI are assembled the median salaries paid teachers of the varying groups in Hackensack and other cities in northern New Jersey, as well as teachers in New York City. The twenty-five percentiles (Q1) and the seventy-five percentiles (Q3) are also given in this distribution. The data could not be secured for the year 1920 or 1921 for New York City and Newark, therefore, the facts of the year 1919 were taken. It should be borne in mind, in reading this table, that since the 1919 facts were secured, the salary schedules in both Newark and New York City have been considerably added to, thus placing these cities considerably above Hackensack in every department.

It will be seen that in no sense are Hackensack's salaries to be considered exceedingly high as compared with the salaries actually paid in many of these other communities. Such cities as Hoboken, Bayonne, Jersey City, Englewood, Trenton, Montclair, Paterson, Newark and New York have all paid higher salaries than Hackensack in one field or another according to this distribution. Hackensack must continue to maintain the excellence of its teaching staff by paying the salaries which are comparable with the other cities which have similar economic conditions confronting them.

TABLE XI

COMPARISON OF SALARIES OF HACKENSACK TEACHERS (1919-20) AND (1920-21) WITH SALARIES IN OTHER JERSEY CITIES (1919-20) AND NEW YORK CITY (1919-20)

CITIES IN NEW JERSEY	Salary Data, Elementary Teachers			Salary Data, Jr. H. S. Women Teachers			Salary Data, Sr. H. S. Women Teachers			Salary Data, Sr. H. S. Men Teachers		
	Median	Q 1	Q 3	Median	Q 1	Q 3	Median	Q 1	Q 3	Median	Q 1	Q 3
Asbury Park, ...	981	842	1047	1083	963	1163	1300	1186	1431	1740	1625	1790
Englewood, ...	1211	1085	1323	1260	1200	1333	1540	1400	1700	.....	.....	.....
Rahway, ...	945	886	995	.....	.....	.....	1208	1146	1263	1733	1640	1875
Bayonne, ...	1236	1071	1528	.....	.....	.....	1875	1763	2033	2067	2017	2533
Elizabeth, ...	950	799	1154	.....	.....	.....	1450	1208	1593	1900	1700	1875
Hoboken, ...	1707	1355	1838	1750	1663	1856	2200	1900	2400	2327	2063	2490
Passaic, ...	1327	1215	1426	.....	.....	.....	1627	1517	1687	2000	1905	2250
Camden, ...	1048	961	1251	1267	1103	1363	1390	1247	1475	2036	1625	2266
Jersey City, ...	1255	1017	1543	.....	.....	.....	2125	1915	2463	2714	2350	3023
Trenton, ...	962	786	1067	1289	1167	1433	1513	1361	1883	.....	.....	.....
Paterson, ...	1202	1131	1391	.....	.....	.....	1671	1517	1950	2113	1708	2444
Montclair, ...	1647	1526	1912	1883	1766	2056	2008	1845	2131	3100	2725	3243
Newark, ...	*1300	*933	*1345	.....	.....	.....	*2215	*1580	*2530	*2215	*1580	*2530
New York City,.. 1919-1920	*1283	*940	*1568	.....	.....	.....	*2512	*2013	*2562	*2512	*2013	*2562
Hackensack, ... 1920-1921	1223	1112	1347	1385	1328	1443	1495	1417	1623	2033	1800	2150
Hackensack, ...	1347	1251	1451	1506	1418	1590	1662	1583	1800	2025	1850	2250

* Data taken from "Teachers' Salaries and Schedules" (1919), by E. S. Evenden, Teachers College, Columbia University, N. Y. C.

It is not clear, from the original data, whetber special bonuses have been included in every case in the above figures or not. This should be taken into consideration in reading this table. The figures for Hackensack for 1919-1921 show a substantial increase which also would have been included for the other communities if their data had been available.

THE AGE OF TEACHERS IN HACKENSACK

In Table XII it will be noted that the median elementary school teacher is about thirty years of age, the median high school male teacher is about thirty-three years of age, high school women teachers thirty years of age and the median special teacher and principal is in the range of thirty-eight to forty years of age.

Taking it all in all, the Hackensack staff is a well-balanced staff with respect to age and maturity. There is not, as is found in some school systems, a large group of very old teachers nor a large group of very young teachers. This median age in all instances compares very favorably with the age data which are available from other sources.

TABLE XII.

DISTRIBUTION OF TEACHERS IN HACKENSACK BY AGE GROUPS AND DEPARTMENTS

Age* Range	Elementary School Teachers		Senior High School Teachers		Junior High School Teachers		Special Class Teachers		Principals	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
20 to 24	....	19	1	1	1	2	.....	1	.....	.....
25 to 29	....	18	4	13	2	1	.....	.....	.....	.....
30 to 34	....	14	3	7	.....	3	.....	2	1	1
35 to 39	....	11	3	1	.....	2	.....	1	.....	1
40 to 44	....	4	1	5	.....	.....	.....	.....	.....	2
45 to 49	....	4	2	1	.....	2	.....	3	1	.....
50 to 54	....	3	.....	.....	.....	.....	.....	1	1	.....
55 to 59	....	2	.....	.....	.....	.....	.....	.....	.....	.....
Median	....	30–1/6 yrs.	33–1/3 yrs.	30 yrs.	27 yrs.	33–1/3 yrs.	.....	40 yrs.	48 yrs.	38 yrs.
Mode	....	26 yrs.	29 yrs.	28 yrs.	.....	.....	.....	.....	.....	.....

* Age data were not furnished by 22 teachers.

Hackensack's problem in the selection and rating of teachers may be divided into the following elements:

1. There should be developed a body of permanent teachers who should form the nucleus for public school service in this city.

2. In developing and maintaining a salary schedule it should be borne in mind that these mature teachers, whether men or women, whether married or single, frequently have other persons dependent upon them for total or partial support. This has been evident from nation-wide investigations.

3. Teachers will remain in a school system and will join the professionally developing group only as they are provided with a living wage, together with adequate returns which will permit of saving.

4. There should be every effort expended in Hackensack to provide the incentive for thorough and painstaking work in the profession of teaching by paying salaries which will not necessitate supplementary employment outside of the teaching field.

5. Hackensack should continue to draw as largely as possible from the best training schools in the country and should never

be content with selection from a small group of training schools or from a narrow section of the country.

6. Hackensack's method of selection from a very extensive field is a decided element of strength in the teaching staff.

7. Hackensack should continue to resist the inroads made upon its teaching staff by large cities in its immediate vicinity by continuing to pay salaries which are commensurate with the ones paid elsewhere.

8. From other evidence gathered during the survey, it has been shown that Hackensack's teachers are highly professionally minded and have availed themselves of many opportunities for advancement in the professional field. Hackensack should encourage its teachers to continue the splendid work which they have been doing in this respect.

THE PROFESSIONAL STATUS OF THE TEACHING STAFF AND THE QUALITY OF INSTRUCTION

The Sources of Teacher Supply

Hackensack does not draw any large proportion of its teachers from one training school. Hackensack is fortunate in this respect. A reasonable number of different types of training represented in the teaching staff will help much in giving a breadth of view to all of the teachers and toward bringing together various teaching methods and teaching ideas, which should tend to improve the entire school system. Sixty-seven different institutions of training are represented in the present teaching staff. The normal schools from which the largest number of the teachers have come, are the Montclair State Normal and the Trenton State Normal. Twenty members of the present staff are from the Montclair State Normal and fifteen from the Trenton State Normal. The other institutions which are represented with more than two members of the teaching staff are shown in Table XIII.

TABLE XIII

THE INSTITUTIONS OF TEACHER TRAINING WHICH ARE REPRESENTED BY TWO MEMBERS OR MORE OF THE PRESENT TEACHING STAFF—JUNE, 1921

Various Institutions	*Number of Representatives*
Montclair State Normal,	20
Trenton State Normal,	15
Fitchburg State Normal,	6
New Paltz State Normal,	6
Courtland State Normal,	5
Mount Holyoke—A. B.,	5
Salem State Normal,	4
Teachers College—B. S.,	4
Bridgewater State Normal,	3
Oswego State Normal,	3
Teachers College—A. M.,	3
Barnard College—A. B.,	3
Bates College—A. B.,	2
Ethical Culture,	2
E. Stroudsburg Normal School,	2
Froebel Training School,	2
Framingham Normal,	2
Geneseo Normal,	2
Columbia—M. A.,	2
New York State Normal,	2
New York University—Art,	2
Pratt Institute,	2
Vineland Training School,	2
Syracuse University—A. B.,	2
Syracuse University—Ph. B.,	2

The professional status of the teaching staff is shown by the diplomas or degrees which are held. Twenty-five members of the staff have the degree of Bachelor of Arts. Ninety-three members hold the normal school diploma. Ten members hold the Bachelor of Science degrees. Six of the teaching staff have been awarded the Master of Arts degree, while three have been awarded the Ph.B. and one the Ph.D. degree. The distribution of degrees is shown in Table XIV. The indication is that teachers are being selected into the school system of Hackensack on the basis of their ability to prove that they have had adequate training.

TABLE XIV

DEGREES AND DIPLOMAS HELD BY THE TEACHING STAFF OF HACKENSACK

Normal School Diplomas,	93	Vineland Special,	2
College B. A.,	25	Ph. D.,	1
High School Diploma and Credits,	14	Juris Doctor,	1
College B. S.,	10	B. Com. Sci.,	1
College A. M.,	6	B. Phys. Ed.,	1
Kindergarten Diploma,	5	Extension L. L. B.,	1
Business Diploma,	4	Less than H. S. Graduation,	1
High School only,	4		172
Ph. B.,	3		

Data concerning the nature and amount of supervision, as well as the professional activities of the teachers, their problems and

difficulties, have been secured. A questionnaire of thirteen questions covering these problems and submitted by practically all of the teachers has supplemented classroom visitation and discussions with teachers for the purpose of securing this information. The thirteen questions of the questionnaire follow. The answers returned by the teachers were tabulated and analyzed. In large measure, all of the questions were answered by all of the teachers, thus showing their professional attitude toward the survey.

Name_____ Sex_____ Date of birth_____

Present address_____ Permanent address_____

Certificate now held_____
(College graduate life, special, training class, etc.)

Where issued_____ By whom issued_____ When issued_____

EDUCATIONAL PREPARATION

School	Dates Attended	Name and Location of Institutions	Nature of Course Completed	Year of Graduation	Degree or Diploma Received
Elem. School					
High School					
H. S. Training Class					
Normal School					
College and University					
Special Schools					
Summer Sessions Give No. of weeks attended					
Special Courses					

EDUCATIONAL EXPERIENCE

Year	Kind of School	Location of School	Nature of Position—State also grades or subjects	No. of Months Taught	Monthly Salary Rec'd	Yearly Salary Rec'd
1907-08						
1908-09						
1909-10						
1910-11						
1911-12						
1912-13						
1913-14						
1914-15						
1915-16						
1916-17						
19 -						

Date of entering service in this school system (month)_____ (year)_____

Number of years of service *in* this school system (include this year):

As teacher....._____ years As principal....._____ years

As supervisor or special teacher....._____ years As superintendent....._____ years

Total number of years in this school system....._____ years

Number of years of service *before entering* this school system:

As teacher....._____ years As principal....._____ years

As supervisor or special teacher....._____ years As superintendent....._____ years

Total number of years outside this school system....._____ years

Total number of years experience teaching....._____ years

1. Give names of professional journals you read regularly.
2. Give titles of a few of the most interesting books of a professional nature you have studied while teaching. (Report only last two years.)
3. Of what *local* civic or welfare organizations are you a member? (*a*) State the nature of the work each undertakes. (*b*) What active part are you taking in work of each organization?
4. State one or more of the definite school problems on which you are working and tell what is being done.
5. What, if anything, has happened *during this year* that has made a difference in the way you teach?
6. State, if possible, two or more standards by which you would be satisfied to have your teaching judged (that is, the main things you would expect a supervisor to look for while visiting your classroom.
7. What are the chiefdifficulties encountered in your work?
8. What recommendations or suggestions have you concerning these difficulties?
9. What are you paying per week for room?....., board?....., total?.....
10. Do you live with a relative?
11. In what occupation other than teaching do you engage to add to your income?
12. What is the amount derived during the past twelve months from this occupation?
13. How much did you save out of your income during the past twelve months?

The replies to Question 1 show that practically all of the foremost professional journals treating of the general field of education, as well as the specialized fields are read by some of the teachers in Hackensack. The journals which were read to a largest degree by the elementary teachers were "The Normal Instructor and Primary Plans", "The Journal of the National Education Association" and "Primary Education". Where such narrowly specialized journals as the "Normal Instructor" and "Primary Education" were mentioned by teachers, there was also mention made by the same teachers of such other high grade journals as "Teachers College Record", "Elementary School Journal", "School and Society", "School Review" and the "Educational Review." Only twelve teachers failed to report under Question 1. The returns in general indicate that the faculty in Hackensack is endeavoring to keep abreast with modern educational theories and movements by reading the best current educational literature available for this purpose.

Question 2 asked for the titles of the most interesting books of a professional nature read by teachers during the past two years. Over eighty different professional books were reported under this item by the elementary school teachers and approximately 60 such professional books by the high school teachers. The reports included the most modern books on general method, on the curriculum, on psychology, philosophy, and the history of education, as well as those books of a semi-professional nature which give an insight into child life. It was clear that a number of books had been mentioned because extension courses had been recently given in those fields. The complete list reported by the Hackensack teachers would form a most desirable educational library for any school system. There was in many cases apparently a very definite relationship between the specific problems on which teachers are working or the difficulties encountered in their work and the kind of professional reading done. It was interesting to find teachers who reported "foreign children" as constituting their greatest problem, also reporting having read the "Italian Immigrant of Our Time" or "The School Master of a Great City" among the professional or semi-professional books recently studied. When teachers report that their chief problem is lack of mentality on the part of members of the group and that they are also reading the "Measure of Intelligence" by Terman, it is clear that intelligent application is being made by teachers of their reading toward the solution of their classroom problems.

Hackensack teachers reported in answer to Question 3 that they were participating in the work of approximately 35 civic or welfare organizations which are operating in Hackensack. It is quite clear that no teacher can do her best work unless she mingles with the community and learns thoroughly community problems and community ideals. Evidently the majority of the teachers have realized the importance of establishing such relationships with other organizations. The school itself cannot hold its proper place in the development of community life except as it profits from the work that has been done by the purely civic and welfare organizations which have the social and economic development of the community at heart. It is recommended that all Hacken-

sack teachers avail themselves of the first opportunities of associating with these types of enterprises so that the school system and the organizations may mutually profit.

The answers to Question 4, which concerned the definite school problems on which teachers are working, were very illuminating. Only fifteen teachers failed to report on this problem, the reason for the omission not being apparent unless it meant that the teachers were not particularly aware of any outstanding problems. Thirty-five teachers reported that they were working on the use of the project method in teaching, showing that a large group of the Hackensack teachers were interested in the experiment which is at this time meeting with nation-wide discussion. A group of teachers from one school reported that they were concentrating upon the "socialized recitation", and the classroom work observed by the surveyors in this school indicated that this project was being carried forward with a great degree of success in this building. Other very vital problems were mentioned frequently, such as "the establishment of co-operation between the kindergarten and the first grade", "the effort to develop thought-getting in silent reading", "adapting class work to needs of children with varying abilities" and "getting teachers who have been in the same grade for a long period of years to experiment with new methods and modern ideas." The other professional topics mentioned indicate that the work of supervision in the Hackensack schools has been of an extremely satisfactory nature. Teachers have been stimulated to think of their individual problems and to solve them through analytical study and through the application of modern solutions. Without doubt, much of the credit for this general professional tendency on the part of teachers is due to the professional course in teachers' problems taken under the leadership of the supervising principal during this past year.

In answer to Question 5, where teachers were asked to list those things which made a difference in the way they taught during the past year, this professional course taken under the leadership of Mr. Stark was frequently cited as instrumental in improving the work of teachers. Twenty-eight teachers

omitted answering Question 5. This failure may be considered as an indication that no change in their teaching, either for better or for worse, took place during the school year. From the angle of supervision, the answers which might appear with greatest frequency are the following:

1. Demonstration lesson by principal, supervisor, or teacher.
2. Discussion of the demonstration lesson.
3. Conference between teachers and supervisors.
4. Reading and discussion of books.
5. Groups of teachers working on a specific problem.
6. Use of standard tests.
7. Visiting other teachers.

That these seven very excellent means of supervision are being extensively used to improve the quality of instruction in Hackensack is clear from the response given by teachers. Such answers as demonstration lesson in music, visitation of other schools, professional courses, being in a modern school system, having a group with a high I. Q., were frequently recorded by teachers. Apparently supervision is well organized in Hackensack; it serves a very definite purpose and is recognized as a help by the teachers. The work in this field cannot be too extensively developed and it is recommended that further effort be made by teachers and supervisors to carry out the program of supervision involved in the seven items listed above. By developing the program of supervision, teachers and supervisors will develop more uniform standards according to which classroom work should be judged.

The answers to Question 6 indicate a very wide variation in the standards according to which teachers desire to have their classroom work reviewed. The majority of the answers indicated a very clear appreciation on the part of teachers of what their teaching problem was. In fact, it is very clear from these responses that teachers were familiar with the standards developed by Professors McMurry, Strayer, Bonser and others and which are recognized today as the acceptable bases for judging classroom work.

The difficulties encountered in school work, as listed by the teachers, are chiefly those of poor attendance, insufficient equipment, lack of adjustment of newcomers to the Hackensack school

system and the general problem of classification of children on the basis of their intellectual abilities. As has been indicated elsewhere in this report, considerable effort is being expended in Hackensack to produce the most effective results in classification. A number of special classes have been established for the purpose of taking care of certain special groups. The teachers apparently recognize the value of this specialization and are anxious to have the demonstration proceed further in this field. Without doubt, the most serious problem confronting all school systems today is the proper classification of children and the adjustment of the curriculum to the needs of individuals. It is well that Hackensack teachers recognize this as a serious problem and that they are endeavoring to solve it. The attendance problem should not be a serious one in Hackensack and additional effort should be made to correct any evils connected therewith. Teachers frequently have mentioned "too large a class" as one of their difficulties. It is rather surprising to find this mentioned at all as a difficulty as Hackensack's classes, when compared with other cities, are not as large as those found in the average city.

Table XV and Chart No. 8 show that only in the intermediate school are Hackensack classes a trifle larger than the median of 429 other cities and that in the elementary school and in the high school the administration has used every opportunity of reducing the size of classes in Hackensack to the point where the best classroom work can be done. The classroom visitation of a large number of classes in Hackensack bears out the conclusion that the classroom work that is being done is in general of a very superior order and that the work that is being carried on by the teachers is of a thorough and conscientious type which one might expect from the professional group that has been gathered together in that city.

TABLE XV

SIZE OF CLASSES

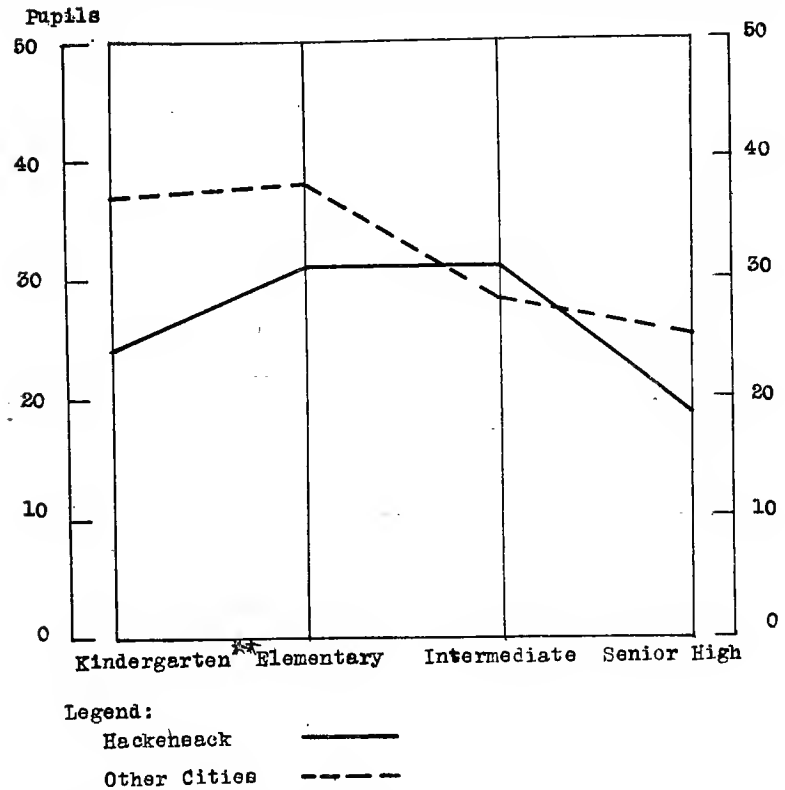
*Hackensack Compared with 429 Other Cities**

SIZE OF CLASSES	KINDERGARTEN		ELEMENTARY		JUNIOR HIGH OR INTERMEDIATE		SENIOR HIGH	
	Other Cities	Hacken-sack	Other Cities	Hacken-sack	Other Cities	Hacken-sack	Other Cities	Hacken-sack
19 pupils or less, ...	320	3	2,860	5	1,480	.....	10,763	112
20–24 pupils, ...	423	5	3,598	6	1,472	1	10,391	51
25–29 "	687	4	7,807	21	2,365	5	10,544	36
30–34 "	703	1	15,229	31	1,718	8	5,354	8
35–39 "	760	1	20,662	11	983	2	2,005	7
40–44 "	680	.....	18,495	.....	498	.....	1,149	2
45–49 "	404	.....	11,102	.....	228	.....	359	1
50–54 "	459	.....	2,415	.....	64	.....	225	.....
55–59 "	136	.....	547	.....	47	.....	130	.....
60 or more pupils, ..	420	.....	480	.....	223	.....	433	.....
Total, ...	4,992	14	83,195	74	9,078	16	41,353	217
Median, ...	37	24	38	30.8	23	29.0	25	18.61
Q 1, ...	29	20.5	32	26.8	28	31.3	19	14.4
Q 3, ...	47	28.3	43	33.8	34	33.8	30	24.

* "Know and Help Your Schools"—Second Report—Issued by the National Committee for Chamber of Commerce Co-operation with the Public Schools, March, 1921.

CHART No. 8

HACKENSACK'S MEDIAN SIZE CLASSES COMPARED WITH MEDIAN SIZE CLASSES OF 429 OTHER CITIES*—JUNE, 1921



Naturally a larger number of teachers refrained from answering the personal questions from 9 to 13 than the questions preceding. In Table XVI are tabulated the responses given to some of these questions. The majority of teachers pay between $4.00 and $6.00 a week for their room and between $7.00 and $8.00 for their board, thus making a total of between $11.00 and $14.00 a week for board and room. Of the ninety teachers reporting the answers to Question 10, 46 do not live with rela-

* Know and Help Your Schools—Report 2—National Committee for Chamber of Commerce Co-operation with Public Schools.

** Calculated on a teacher basis for Hackensack.

tives and 40 do live with relatives. The mere fact that teachers live with relatives means that these relatives pay in one sense part of the cost of living of the teachers. These are facts that must be taken into consideration when salary schedules are being made and salary contracts are being signed. Salaries should be sufficient to enable all teachers to live without being required to undertake outside work. Without question, it is not advantageous to the teaching profession to have teachers engaged in outside employment at the same time. Thirteen teachers reported as engaged in other activities for pay. In seven of these cases, the work done was another kind of teaching. The average amount earned by these thirteen was less than $150. It is fair to imply that these teachers could not as effectively serve the community as those who find it possible to give all of their time to their professional work. The average amount saved by teachers in Hackensack is low. A salary schedule must provide not only a living wage, but also a saving wage. If the reports of those who answered this question are indicative of the total situation in Hackensack, it is clear that the salaries paid are not the sole incentive for drawing good teaching material into this school system.

TABLE XVI

DATA COVERING THE COST OF LIVING OF TEACHERS IN HACKENSACK, 1921

AMOUNT	Number paying Certain Amts. for Room	Number paying Certain Amts. for Board	Number paying Sum Indicated for Bd. & Rm.
Less than $3.00,	5*	2*	1*
$3- 3.99,	8	..	..
4- 4.99,	15	..	..
5- 5.99,	16	4	2
6- 6.99,	2	1	..
7- 7.99,	1	22	2
8- 8.99,	..	8	2
9- 9.99,	..	7	3
10-10.99,	1	7	13
11-11.99,	..	1	9
12-12.99,	..	1	12
13-13.99,	..	..	6
14-14.99,	..	..	4
15-15.99,	..	..	7
16 and over,	..	..	4

* Apparently only partial costs.

THE QUALITY OF INSTRUCTION

Certain elements of instruction are best measured through the use of standard scales or tests. The results secured by the Survey Commission from the measurement of classroom achievements are sufficient proof of the splendid nature of the instruction in the subjects tested. It may reasonably be inferred from the excellent results secured in subjects chosen without consultation with the teachers that the results in the whole field of subject matter teaching are of an exceedingly satisfactory nature.

To supplement the impression secured through the use of the tests and to discover the attitude of the teachers in fields of instruction that are measurable to less degree in concrete terms, the classrooms of fifty teachers were visited while recitations were in progress. All types of elementary classes were in progress during these visitations. For example, twenty classes were engaged as listed below:

1. Debate "Resolved that the Trolley Line should be moved from Main Street."
2. Story writing—Hackensack project.
3. Proverbs with oral and written stories as illustrations.
4. Spelling words in sentences.
5. Recognition lesson in Geography from outline work.
6. Courtis Practice Tests in Arithmetic.
7. Making stuffed, cloth dolls.
8. A written and oral recitation on "Why is New Jersey a Good Place to Live In?"
9. English and Arithmetic for special class of foreign born.
10. Kindergarten—singing—dancing, solo and chorus, band music.
11. Formal Reading.
12. Formal Geography.
13. Formal Spelling.
14. Socialized Spelling.
15. Socialized Arithmetic.
16. Socialized Dramatics.
17. Reading and Dramatization of Fire Scene.
18. Making Sentences.
19. Story writing—"The Lost Girl."
20. Current Events in History.

After a class had been visited, the member of the Survey Commission left the room and recorded his impressions on an outline similar to the following:

OUTLINE FOR JUDGING QUALITY OF INSTRUCTION

Instructions to visitor: *Spend at least two full classroom periods with a teacher before filling out this blank. Make explanatory remarks wherever possible.*

I. SCHOOLROOM ATMOSPHERE

1. *Attitude of teacher:*
(Indicate your general judgment by writing after each sub-item figures 1, 2, 3, or 4. 1=high degree; 4=low degree.)

a. Manner:

courteous	stimulating	indifferent
sympathetic	disturbed	patronizing
dignified	vigorous	dogmatic
enthusiastic	talkative	sarcastic

b. Voice—effective, 1-2-3-4:

low-pitched	pleasant	harsh

c. Enunciation:

clear	indistinct

2. *Personal appearance of teacher:*

attractive	average	unattractive

3. *Command of English:*

excellent	fair	poor

4. *Attitude of children:*
a. toward the work:

interest	spontaneous	forced	lacking

b. toward the group:

courteous	co-operative	individualistic

c. toward the teacher:

friendly	submissive	antagonistic

II. PHYSICAL ENVIRONMENT
(Place an X opposite the items to which careful attention is paid, and an O opposite any to denote special neglect.)

ventilation	neatness of room
temperature	attractiveness of room
lighting	useful materials
seating	care of materials

III. HANDICAPS

Unusual noise
Illness of teacher or children
Uncomfortable physical conditions

IV. METHOD

(Indicate the subject observed.)

1. *Type of lesson:*
(Show by check and comment where the emphasis with regard to the following points was put.)

drill	thought	appreciation

2. *Attention to principles of teaching:*
(Check the items to which the teacher has evidently given attention and place an O where there has been gross neglect or wrong application.)
choice of vital subject matter
good organization of material
motivation from life of children
recognition of relative values
provision for initiative
provision for individual difference
provision for habit formation

3. *Use of text-books:*
absolute reliance upon
as reference books
variety
with discrimination

4. *Preparation:*
definite plan or procedure
broad scope of questions
definite questions
additional illustrative material

5. *Assignment:*
utilize child's problem
suggest material for solution of problems
allows for pupils' co-operation
by pages or paragraphs
by topics
in a manner to prevent confusion or misunderstanding

V. CONTROL
restraint
artificial
self-imposed
reasonable degree of freedom
license

VI. PROVISION FOR INDIVIDUAL HELP
discriminative systematic

Note—Where there are no special directions for checking indicate what you observe by the use of a V.

The impressions gained by all of the judges were then consolidated and in this united form present a cross-section of what is daily occurring in the classrooms of this city.

PERSONALITY OF TEACHERS

The teachers were found to a large degree courteous and sympathetic. They were dignified and enthusiastic and only in rare cases were found to be indifferent or sarcastic. The teachers are accustomed to visitation, are anxious to have their work

commented upon and in few cases seemed disturbed with the visit. The enunciation of the teacher and the pitch of the voice in addressing children were most satisfactory. The children showed respect and admiration for their teachers. The latter apparently recognized that one's personal attitude toward dress and manners has a corresponding effect upon the child. The large majority of the teachers showed an excellent command of English and in no case was a teacher rated poor in this subject.

The children were in marked degree interested in their work, helpful and courteous toward their classmates, and on the most friendly terms with the teachers. Very few unruly or indifferent children were observed.

The teacher had, in the large majority of cases, used every effort to make the classroom attractive and children were conscious of the part they must play in maintaining neatness in the room and in the class work.

Discipline is not formal or rigid, but in the case of practically all of the teachers, a reasonable degree of freedom is permitted in the classroom. There was every indication of growth in the power of self-control and in the respect for the rights of others. Children worked freely, were conscious of the need for self-reliance and yet thoroughly cognizant of the guiding and correcting influence of the teacher.

THE KINDS OF TEACHING

The teaching was far above mechanical and formal levels Stimulation of thinking seemed to be as frequently the aim of the teacher as merely learning through the drill processes. Lessons for appreciation were met with such frequency that it was evident teachers were aware of the values to be secured. One whole school had been emphasizing socialized recitations. The visitors were frequently surprised at the splendid results that were being obtained.

Teachers were not merely teaching subject matter, but were endeavoring to secure many of the other values listed on the score sheet as the following checkings indicate:

TEACHING METHODS AND TEACHING CONTROL OBSERVED IN VISITING THE HACKENSACK SCHOOLS

The numbers opposite each item show with what frequency the items were checked by judges visiting fifty recitations.

1. TYPE OF LESSON

35 drill 34 thought 12 appreciation

2. ATTENTION IN PRINCIPLES OF TEACHING

37 choice of vital subject matter
32 good organization of material
32 motivation from life of children
17 recognition of relative values
18 provision for initiative
12 provision for individual difference
24 Provision for habit formation

3. USE OF TEXT-BOOKS

5 absolute reliance upon
16 as reference books
16 variety
26 with discrimination

4. PREPARATION

36 definite plan of procedure
12 broad scope of questions
26 definite questions
10 additional illustrative material

5. ASSIGNMENT

11 utilize child's problem
3 suggests material for solution of problems
11 allows for pupils' cooperation
2 by pages or paragraphs
8 by topics
14 in a manner to prevent confusion or misunderstanding

6. CONTROL

1 artificial restraint
2 self-imposed restraint
42 reasonable degree of freedom
1 license

7. PROVISION FOR INDIVIDUAL HELP

26 discriminative 8 systematic

THE COURSE OF STUDY

In Hackensack there are available outlines of the courses of study in various forms. The teachers are put in touch with the splendid state monographs outlining courses of study in special fields and there are also available outlines which have been prepared by individual teachers or groups of teachers within the

staff itself. A splendid program is followed with respect to interpretation of the course of study. It should be recognized that for purposes of transfer within the city and transfer to other school systems, a certain fundamental adherence to a uniform course of study is desirable. In Hackensack this is apparently carried to the degree that makes it possible for children to transfer from school to school with a minimum of loss. On the other hand, teachers are evidently left to make their own selections of material and to develop their own school programs beyond the point where such uniformity is desirable and essential. In fact, the "Teachers' Manual" makes it clear that the course of study outlines are furnished merely as guides for the teachers. Each teacher understands that these outlines are not iron-clad directions, but that they are given merely as a basis for her work and that it is her duty to "adapt instruction to the needs of pupils."

That such freedom in the development of the course of study and in the selection of materials is utilized to splendid advantage by the teachers is evident in the answers given to one of the questions on the teacher questionnaire. When teachers were asked to indicate the school problems on which they were working, many teachers included a problem involving the course of study. Such answers as the following appear:

Work on a course of study for a seventh grade group
Course of study in mathematics for an academic group
Course of study in English
Course of study in 8th Grade civics
History for the Intermediate—Academic course
Civics for manual arts pupils
Course of study for commercial department
Course in arithmetic
Experiments in spelling
Course of study in geography for the manual arts
Course of study for academic group
Syllabus for high school economics and American history
Course of study for clerical students
Course in mathematics for commercial group
Course in mathematics for industrial arts
Organization of social science course
Revision of European history courses

To make course in science and biology appeal to various types of boys and girls
To make courses which prepare for citizenship and also for college entrance
Making a course in commercial English
Course of study in domestic art

Apparently every phase of the course of study is being given constant attention by the teaching staff. There need be no fear in Hackensack but that children will be constantly brought in touch with new materials and methods as such are developed elsewhere and as the teachers in Hackensack find such materials and methods desirable for use in the local school system. In many school systems, scissors and paste play the greatest part in the making of a course of study. Apparently this is not true in Hackensack as one views the course of study outlines. Sane, safe judgment has been brought to bear by the teachers upon their problems and on the basis of such judgment have the contributions to the course of study been made.

THE MEASUREMENT OF THE SUCCESS OF THE COURSE OF STUDY PROGRAM

The success of a course of study can be measured first in such definite quantitive terms as are made possible through the use of standard tests and scales. A second means of measuring success as boys and girls are passing through school is through an adequate program of supervision and through the judgment rendered by the supervisors on the work that is being done. The Hackensack faculty have recognized the gain to be secured from the application of standard tests. The following quotation from the supervising principal's report indicates some of the results secured and the use made of such results:

> "A very interesting study of the abilities of the children of the Union Street School was made by the principal, Miss Chase. Standard tests of general intelligence, and ability in arithmetic, spelling and English composition were used. The results confirmed the conclusions suggested by all such measurements, that the children of any class vary widely in ability and must

be treated as individuals for the best results. Considerable progress was made in devising methods for teaching those whose abilities were found to be farthest from normal."

The splendid results recorded for the Hackensack children in the tests applied by the Survey Commission indicate that in the tool subjects, Hackensack's course of study is such as to enable Hackensack children to keep in the van of educational progress. The judgments rendered by the Survey Commission on the classroom recitations indicate that the allied values that are to be secured from a course of study which fits children's needs are being obtained to a maximum degree in Hackensack. The cultivation of proper personal habits, the establishment of ideals of citizenship and the socialization of children so that they may become unembarrassed, clear-thinking, active working participants in our social life are some of the splendid results that are being secured.

SUPERVISION

Perhaps in no other phase of educational leadership does a superintendent show his professional skill to the degree that it becomes evident in the development of the course of study. Splendid types of course of study outlines, the large number of teachers working on a constructive development of the course of study, the present educational organization involving adjustment of the course of study to the needs of various types of children and the splendid success being achieved in classroom work in all its phases are, without doubt, due to the professional skill of the supervising principal and his staff of principals and supervisors. Under this guidance, Hackensack's school system will continue to maintain its leadership among the school systems of the country.

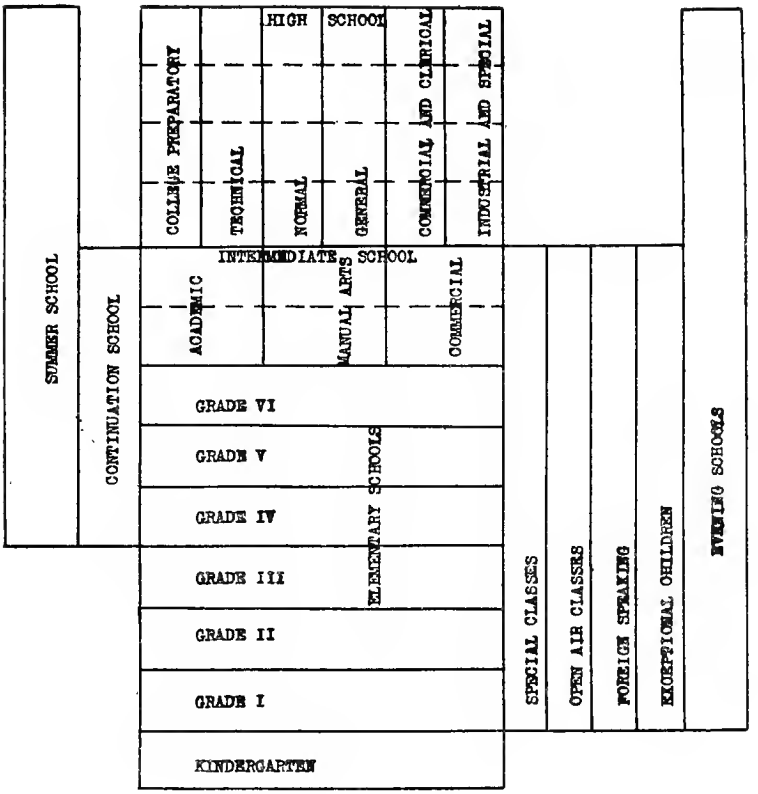
THE EDUCATIONAL PROGRAM

Chart No. 9 shows the opportunities in education that are being provided in the public school system. In the elementary schools, the kindergarten forms the basis for the training beyond.

The first six grades of the elementary school are followed by the two years of the intermediate school where the possibility of differentiation in courses of study begins. The program for special classes is being carried to the point where it meets the needs of all types of special groups. Evidently as new types of special groups are found in large enough numbers, this program will take care of their needs. The continuation school program provides for those who leave early to go to work. A summer scrool program provides for the making up of lost time or for the advancement of those who feel it possible to profit by rapid advancement. The courses that are offered in the high school are of such a nature as to meet the needs of practically all boys and girls. Hackensack's educational program is one which will meet satisfactorily every present known test. The specialization in classification has resulted in the present splendid arrangement. As the school plant makes it possible and the school funds become available, further specialization in the interest of the individual child will no doubt follow. Parents are interested in the development of a school system largely because they are interested in the development of one, two, three or more of their own children. Each parent must bear in mind that his child is being recognized as an individual problem in Hackensack and that the object of the supervisory officers has been to make the educational program conform to the needs of the individual child as far as money and school plant permitted.

CHART No. 9

OUTLINE OF EDUCATIONAL PROGRAM OF HACKENSACK PUBLIC SCHOOLS



INDUSTRIAL ARTS DEPARTMENT

It is a commonly accepted principle of all phases of educational handwork that the aims and objectives be largely determined and administered in the light of local interests and demands. Hackensack's peculiar industrial and economic situation has a tendency to preclude specialized training in any one industry and it is also true that the large majority of Hackensack students are absorbed by industry in other neighboring cities. Hence it has been the policy of Hackensack's school board and supervising principal to

adopt the generalized and differentiated course of industrial arts rather than a program of specialized technical or vocational training. During the past year, this course has been presented by a city supervisor; two wood and metal working instructors and one printing instructor at the high school; and one part and one full time instructor for Schools No. 1, 2, 3 and 4. During the current year, work in the department has been hampered considerably through loss by death of one instructor and resignation of two others. Under the organization of the last year, the supervisor and full time instructor held classes at Schools No. 1, 2, 4 and 5 (annex), being assisted by one of the instructors from the high school for one day and also by the part-time instructor.

The high school industrial course consists of wood and metal work and printing, utilizing a large shop for wood and metal and a separate room for printing. Schools No. 1, 2 and 4 each have one or two rooms serving for class, storage, and finishing rooms. A 30x50 foot portable has been erected at the rear of School No. 5, equipped with twelve woodworking benches and one metal working bench. This portable serves as a shop for children from School No. 3.

Through the efforts of the industrial arts staff, an excellent course of study for Grades 5 to 9, inclusive, has been developed on the bases of the past and present day practices and units of work already tested and proven of value. The chief objectives and aims for the work for Grades 5 and 6 have been stated as follows:

> "Provisions for the general development of the children by giving them common experience to meet common needs; bringing the children in contact with actual life activities, not to train for school, but rather to supply information and knowledge in regard to industry; the establishing of right attitudes toward industry and the industrial worker; to develop an appreciation of how man has converted raw materials into finished products in order to supply his needs.
>
> This work has been developed through working with mediums of wood, clay and leather, iron, cement and paper. The aims and objectives of work for the junior high school are as follows:

1—The presentation of a variety of typical materials, tools and machines, in order that they may find out the "how" and "why" of industrial processes.

2—The presentation of freedom and choice and variety of industrial samplings to thoroughly try out, discover and develop any interests and ability for doing and managing industrial work, the giving of sufficient first-hand information and varied experience through a combination of diversified industrial activities and occupational studies to make social and economic choices of life more intelligent when the time for selection comes."

The work in the high school centering around wood and metal and cement work has been developed along purely optional lines. Some of the projects completed by the students have consisted of household furniture (costumers, taborets, chairs and library tables); tools (hammers, rivet sets, punches); and cement vases and walks. It is the policy of the industrial arts department to correlate much of the school work with home activities, considerable emphasis being placed upon repair work. During the past year the students have constructed jumping standards, pedestals and library racks for the school board.

RECOMMENDATIONS

The greatest professional growth can come to a school system from the active and constant participation on the part of all teachers in the analysis of curriculum problems and in the development of the course of study. It is recommended that this active participation be encouraged on the part of all teachers and that the faculty be even further organized to maintain the course of study revision which is necessary in any growing school system. The teachers must apply the curriculum and it is only as they share in the development thereof that they have the feeling that it is their own work and that they will carry forward the program that is advanced with eagerness and success.

The course of study in Hackensack will never be a fixed one. Modifications must be going on constantly, and as the world progresses the curriculum should reflect the changes which take place. This has been the local tendency, but should be made such to a maximum degree and with the co-operation of all the teachers.

The Cost of Education in Hackensack

CONTENTS.

PAGE.

The Cost of Education in Hackensack, ... 215
Current Expenditures for Schools—Fiscal Year 1919–20, ... 216
Cost per Pupil in Average Daily Attendance, ... 218

TABLES.

TABLE. PAGE.

I. Population of Hackensack and Thirty Other Cities Used in Financial Comparisons, ...215–216
II. Total and Per Capita Current Expenses for Schools in Thirty-one Cities for the Fiscal Year 1919–20, ... 217
III. Current Expenses for Schools in Fifteen New Jersey Cities and New York City—Fiscal Year 1919–1920, ... 218
IV. The Ranks of Thirty-one Cities in the Amounts Expended for Maintenance of Schools per Pupil in Average Daily Attendance—Years 1908–20, ... 219
V. The Ranks of Thirty-one Cities in the Amounts Expended for Maintenance of Schools per Pupil in Average Daily Attendance—Year 1920, ... 220
VI. Expenditure for Maintenance of Schools per Pupil in Average Daily Attendance in Cities of Group II.—Year 1919–20, .. 221
VII. Rank of Fifteen Cities of Group II in the Expenditure for Maintenance of Schools per Pupil in Average Daily Attendance—1908–20, ... 222
VIII. The Expenditure for School Maintenance per Pupil in Average Daily Attendance in Hackensack Compared with the Median of such Expenditures in Two Groups of Cities, .. 223
IX. The Bonded Indebtedness and Value of School Buildings for Hackensack and the Other Cities of Groups I and II, ... 224
X. Expenditures per Pupil on Two Unit Bases, ... 225

CHARTS.

CHART. PAGE.

1. Comparison of Costs per Pupil per Day on the Basis of Actual and Possible Attendance, ... 226

The Cost of Education in Hackensack

The amount of money which a community spends for the maintenance of the schools is a good measure of the excellence of the educational facilities provided. However, it is not an infallible guide, for large sums may be spent and mediocre results obtained. Poor management in the expenditure of moneys generously provided by the community may result in the failure of the community to get adequate returns for its money. A very thorough survey of the actual results being accomplished must go hand in hand with a study of the sums of money spent. This section of the survey reports the results of a study of the revenues and expenditures of the Hackensack school district over a period of years and a comparison with like data from other cities.

For purposes of comparison, two groups of cities were selected. The first group is a selection of thirty small Eastern cities, comparable in size with Hackensack. The median population of this group is 15,057, while the population of Hackensack is 17,667.

TABLE I

POPULATION OF HACKENSACK AND 30 CITIES USED IN FINANCIAL COMPARISONS

Name of City	*Population*	*Rank*
Ansonia, Conn.,	17,643	12
Asbury Park, N. J.,	12,400	24
Auburn, Me.,	16,985	13
Bloomfield, N. J.,	22,019	6
Bridgeton, N. J.,	14,323	20
Carlisle, Pa.,	10,916	26
Clinton, Mass.,	12,927	23
Concord, N. H.,	22,167	5
Dunkirk, N. Y.,	19,336	10
Englewood, N. J.,	11,627	25
Franklin, Pa.,	9,970	28
Gardner, Mass.,	6,971	14
Glen Falls, N. Y.,	16,628	15
Gloucester, Mass.,	22,947	4
Hackensack, N. J.,	*17,667*	11
Hornell, N. Y.,	15,025	18
Landsford, Pa.,	9,625	29
Lebanon, Pa.,	24,643	3
Little Falls, N. Y.,	13,029	22
Marlboro, Mass.,	15,028	17
Millville, N. J.,	14,691	19

TABLE I—(*Continued*)

POPULATION OF HACKENSACK AND 30 CITIES USED IN FINANCIAL COMPARISONS*

Name of City	*Population*	*Rank*
Montclair, N. J.,	28,810	1
Olean, N. Y.,	20,506	9
Phœnixville, Pa.,	10,484	27
Plainfield, N. J.,	27,700	2
Rutherford, N. J.,	9,497	30
Saratoga Springs, N. Y.,	13,181	21
Shamokin, Pa.,	21,204	8
Sharon, Pa.,	21,747	7
Tyrone, Pa.,	9,084	31
Weymouth, Mass.,	15,057	16

* These cities will be called cities of Group I in the following pages.

CURRENT EXPENDITURES FOR SCHOOLS—FISCAL YEAR 1919-20

In Table II are shown for the first group of cities the total current expenses for schools, exclusive of capital outlay, and the current expenses, for the same period, per capita of total population for the school year 1919-20. It is seen from this table that Hackensack ranks second in its total expenses for schools and third in its per capita for total expenses for this particular year. The city which ranks first in this table is Montclair, N. J. In the reading of this table, it should be borne in mind that the group of cities includes cities chosen at random from seven eastern States. Hackensack, like Montclair and Englewood, is one of the few cities in this list which is confronted with the competition from very large cosmopolitan centers. Some of the highest salaries paid in public education are being paid by such cities as New York, Newark, Yonkers, Jersey City and Montclair. Since the cost of teaching is approximately 65 to 70 per cent of the total cost of education in the majority of these communities, the reason is clear why Hackensack's educational budget is high, as compared with the budgets of many other communities of the same size. Hackensack is also distinctly a residential community, where the homes are high grade and where the parents are anxious to secure for their children the very best educational returns possible. It is evident that all of these factors have had a very direct bearing upon the cost of education in Hackensack. It is not clear that Hackensack

will ever be able to reduce its educational budget to the point where it will not rank among the foremost of cities of its size in the United States.

TABLE II

TOTAL AND PER CAPITA CURRENT EXPENSES FOR SCHOOLS IN 31 CITIES FOR THE FISCAL YEAR 1919–20

NAME OF CITY	CURRENT EXPENSES FOR SCHOOLS		CURRENT EXPENSES FOR SCHOOLS PER CAPITA OF TOTAL POPULATION	
	Amount	Rank	Amount	Rank
Ansonia, Conn.,	$199,469.33	8	$11.30	7
Asbury Park, N. J.,	.....	..	.....	..
Auburn, Me.,	124,710.98	19	7.34	25
Bloomfield, N. J.,	256,161.64	5	11.63	6
Bridgeton, N. J.,	114,069.26	20	7.96	18
Carlisle, Pa.,	76,487.96	28	7.00	26
Clinton, Mass.,	108,316.82	22	8.34	16
Concord, N. H.,	235,285.71	6	10.61	9
Dunkirk, N. Y.,	146,283.55	15	7.56	21.5
Englewood, N. J.,	217,536.58	7	18.70	2
Franklin, Pa.,	103,844.63	24	10.36	10
Gardner, Mass.,	152,598.11	13	8.99	14
Glens Falls, N. Y.,	103,844.63	23	6.24	30
Gloucester, Mass.,	296,163.40	4	12.90	5
Hackensack, N. J.,	*322,392.74*	*2*	*18.23*	*3*
Hornell, N. Y.,	113,382.68	21	7.54	23
Landsford, Pa.,	71,858.60	29	7.46	24
Lebanon, Pa.,	163,569.29	12	6.63	28
Little Falls, N. Y.,	98,614.19	26	7.56	21.5
Marlboro, Mass.,	124,875.00	18	8.30	17
Millville, N. J.,	144,398.00	16	9.82	12
Montclair, N. J.,	570,677.64	1	19.80	1
Olean, N. Y.,	198,022.00	9	9.65	13
Phœnixville, Pa.,	69,295.45	30	6.60	29
Plainfield, N. J.,	309,419.27	3	11.11	8
Rutherford, N. J.,	164,529.98	11	16.53	4
Saratoga Springs, N. Y.,	102,798.25	25	7.79	20
Shamokin, Pa.,	141,886.06	17	6.69	27
Sharon, Pa.,	172,097.64	10	7.91	19
Tyrone, Pa.,	80,433.15	27	8.85	15
Weymouth, Mass.,	152,394.92	14	10.12	11

When the situation in Hackensack is compared with those communities which are confronted with similar economic and social problems, there is not as wide a difference between the expenditures per capita of total population as there is in the first

instance. Hackensack ranks third among 15 cities, including New York City, in the current expense per capita of total population. It is clear that the fact that the very large majority of children in Hackensack attend public schools is a factor in ranking Hackensack towards the top in this list. Cities which out-rank Hackensack in the amount paid are the cities of Montclair and Englewood.

TABLE III

CURRENT EXPENSES FOR SCHOOLS IN 15 NEW JERSEY CITIES AND NEW YORK CITY—FISCAL YEAR 1919-1920

NAME OF CITY*	Current Expenses for Schools		Current Expenses per Capita for Schools	
	Amount	Rank	Amount	Rank
Asbury Park, ...				
Bloomfield, ...	$256,161.64	12	$11.63	5
East Orange, ...	526,212.15	9	10.37	9
Elizabeth, ...	687,054.23	6	7.18	14
Englewood, ...	217,536.58	13	18.70	2
*Hackensack, ...	*322,392.74*	*10*	*18.23*	*3*
Jersey City, ...	2,477,248.70	3	8.31	12
Montclair, ...	570,677.64	8	19.80	1
Newark, ...	4,726,450.38	2	11.41	7
New York City, ...	65,169,427.98	1	11.59	6
Passaic, ...	641,094.15	7	10.04	10
Paterson, ...	1,253,857.74	4	9.22	11
Plainfield, ...	309,419.27	11	11.11	8
Rutherford, ...	164,529.98	14	16.53	4
Trenton, ...	940,163.52	5	7.88	13

* These cities will be called cities of Group 11 in the following pages.

COST PER PUPIL IN AVERAGE DAILY ATTENDANCE

In Table IV appear the ranks of the cities of Group I for each of the years from 1908 to 1920 in the cost per pupil in average daily attendance. The cost figures for these years were secured from the Annual Reports of the United States Commissioner of Education, with the exception of the year 1919-20, the data for which were secured from The National Committee for Chamber of Commerce Co-operation with the Public Schools. For the years 1916-17 and 1918-19 and elsewhere where blanks are found, the data were not available in either of the two sources indicated above. Hackensack's rank among these cities varied from 2 to 8 during this period. Plainfield has ranked from 2 to 5. The rank of Asbury Park has varied from 2 to 7

and Englewood has maintained a rank of less than 5 in the majority of cases for which the data were available.

TABLE IV

THE RANKS OF 31 CITIES IN THE AMOUNTS EXPENDED FOR MAINTENANCE OF SCHOOLS PER PUPIL IN AVERAGE DAILY ATTENDANCE—YEARS 1908–20

NAME OF CITY	1908–1909	1909–1910	1910–1911	1911–1912	1912–1913	1913–1914	1914–1915	1915–1916	1917–1918	1919–1920
Ansonia, Conn.,	19	18	15	19	.....	21	.....	22	19	8
Ashury Park, N. J.,	3	4	2	4	4	6	6	7	6	.....
Auburn, Me.,	8	6	.....	21	.....	13	19.5	17	24	21
Bloomfield, N. J.,	4	3	.....	5	12	5	7	6	3	.....
Bridgeton, N. J.,	21	20	.....	24	18	.....	.....	28	22	20
Carlisle, Pa.,	20	21	17	22	20	23	23	26	21	23
Clinton, Mass.,	12	13	.....	9	9	9	16	11	11	10
Concord, N. H.,	6	5	.....	.....	5	7	9	8	4	2
Dunkirk, N. Y.,	23	23	7	7	15	11	13	14	9	17
Englewood, N. J.,	2	2	.....	.....	19	3	3	5	.....	.....
Franklin, Pa.,	9	8	.....	.....	.....	.....	.....	.....	.....	4
Gardner, Mass.,	10	9	8	13	7	19	22	21	13	15
Glen Falls, N. Y.,	.....	.....	.....	.....	.....	.....	.....	.....	5	11
Gloucester, Mass.,	17	17	11	17	13	14	17	18	17	6
Hackensack, N. J.,	.....	.....	*4*	*2*	*2*	*2*	*4*	*4*	*8*	*3*
Hornell, N. Y.,	15	12	5	8	.....	.....	8	.....	15	24
Landsford, Pa.,	.....	.....	.....	.....	.....	.....	21	20	.....	13
Lebanon, Pa.,	13	15	14	12	16	17	24	27	25	26
Little Falls, N. Y.,	7	7	3	11	8	.....	10	15	12	12
Marlboro, Mass.,	16	16	10	14	10	12	15	12	7	7
Millville, N. J.,	18	19	.....	18	21	22	14	24	14	9
Montclair, N. J.,	1	1	1	1	1	1	1	1	1	1
Olean, N. Y.,	5	.....	6	6	11	8	12	13	20	16
Phoenixville, Pa.,	14	11	12	16	14	15	19.5	19	18	22
Plainfield, N. J.,	.....	.....	.....	3	3	.....	2	2	2	5
Rutherford, N. J.,	.....	.....	.....	.....	23	4	5	3	.....	.....
Saratoga Springs, N. Y.,	.....	.....	.....	10	6	10	11	10	10	14
Shamokin, Pa.,	21	22	16	23	22	24	26	9	26	25
Sharon, Pa.,	11	10	13	20	24	18	25	23	23	19
Tyrone, Pa.,	.....	.....	.....	.....	.....	20	.....	25	.....	18
Weymouth, Mass.,	.....	14	9	15	17	16	18	6	16	.....

The cost per pupil in average daily attendance for the year 1920 in these 31 cities of Group I is shown in Table V. The cost per pupil in average daily attendance in Hackensack has been $98.11 (with third rank) amoung this group of cities. Montclair has exceeded Hackensack in the cost per pupil with the amount of $109.19. Concord, N. H., ranks second with $103.92.

TABLE V

THE RANKS OF 31 CITIES IN THE AMOUNTS EXPENDED FOR MAINTENANCE OF SCHOOLS PER PUPIL IN AVERAGE DAILY ATTENDANCE—YEAR 1920

Name of City	*Amount*	*Rank*
Ansonia, Conn.,	$65.63	8
Asbury Park, N. J.,	.....	..
Auburn, Me.,	48.54	21
Bloomfield, N. J.,	.....	..
Bridgeton, N. J.,	48.87	20
Carlisle, Pa.,	48.47	23
Clinton, Mass.,	63.52	10
Concord, N. H.,	103.92	2
Dunkirk, N. Y.,	54.97	17
Englewood, N. J.,	.....	..
Franklin, Pa.,	77.61	4
Gardner, Mass.,	57.89	15
Glen Falls, N. Y.,	63.51	11
Gloucester, Mass.,	70.03	6
Hackensack, N. J.,	*98.11*	*3*
Hornell, N. Y.,	41.96	24
Landsford, Pa.,	61.00	13
Lebanon, Pa.,	40.48	26
Little Falls, N. Y.,	62.13	12
Marlboro, Mass.,	67.39	7
Millville, N. J.,	64.26	9
Montclair, N. J.,	109.19	1
Olean, N. Y.,	55.17	16
Phoenixville, Pa.,	44.53	22
Plainfield, N. J.,	73.47	5
Rutherford, N. J.,	.....	..
Saratoga Springs, N. Y.,	57.97	14
Shamokin, Pa.,	40.70	25
Sharon, Pa.,	50.14	19
Tyrone, Pa.,	50.17	18
Weymouth, Mass.,	.....	..

If the ratio between average daily attendance and total enrollment in the Hackensack schools were increased, as there is every evidence that it can be, the cost per pupil in average daily attendance in Hackensack would fall perceptibly. It, however, would not fall to a point where Hackensack would rank much lower among this particular group of cities. When compared with the cities of Group II on this item of cost per pupil in average daily attendance, Hackensack ranks between Montclair and New York City for the cities from which data could be secured.

TABLE VI

EXPENDITURE FOR MAINTENANCE OF SCHOOLS PER PUPIL IN AVERAGE DAILY ATTENDANCE IN CITIES OF GROUP II—YEAR 1919-20

NAME OF CITY	Expenditure for Current School Expenses	Number of Pupils in Average Daily Attendance	Cost per Pupil in Average Daily Attendance	Rank
Asbury Park, N. J.,	.....	2,227	.....	.....
Bloomfield, N. J.,	$256,161.64	3,265	$78.46	6
East Orange, N. J.,	526,212.15	6,705	78.48	5
Elizabeth, N. J.,	687,054.23	11,773	58.35	12
Englewood, N. J.,	217,536.58	1,979	109.92	1
Hackensack, N. J.,	*322,392.00*	*3,286*	*98.11*	*3*
Jersey City, N. J.,	2,477,248.70	42,932	56.20	11
Montclair, N. J.	570,677.00	5,226	109.19	2
Newark, N. J.,	4,726,450.38.	64,125	73.70	7
New York City,	65,169,427.98	769,095	84.73	4
Passaic, N. J.,	641,094.15	9,960	64.36	10
Paterson, N. J.,	1,253,857.74	.....	.....	.....
Plainfield, N. J.,	309,419.00	4,211	73.47	8
Rutherford, N. J.	164,529.00	.....	.....	.....
Trenton, N. J.,	940,163.52	13,761	68.32	9

When the cities of Group II are ranked on the basis of expenditures for maintenance per pupil in average daily attendance for the years 1908-20, Hackensack's rank varies from 2 to 10 in this table. Plainfield ranks from 2 to 6; Englewood from 2 to 14; Newark from 2 to 10; New York City from 3 to 8, while Montclair keeps first place among this group.

TABLE VII

RANK OF 15 CITIES OF GROUP II IN THE EXPENDITURE FOR MAINTENANCE OF SCHOOLS PER PUPIL IN AVERAGE DAILY ATTENDANCE—1908–20

CITY	1908–1909	1909–1910	1910–1911	1911–1912	1912–1913	1913–1914	1914–1915	1915–1916	1917–1918	1919–1920
Asbury Park,	3	6	3	7	7	8	8	10	9	.....
Bloomfield,	5	4	.....	9	13	7	9	7	3	.....
East Orange,	6	7	4	4	6	2	5	6	4	4
Elizabeth,	11	11	8	.....	11	13	.....	.....	12	9
Englewood,	2	3	2	.....	14	4	3	5	.....	.....
Hackensack,	.....	.....	*6*	*2*	*2*	*3*	*4*	*4*	*10*	*2*
Jersey City,	10	.....	1	11	9	11	11	13	6	10
Montclair,	1	1	1	1	1	1	1	1	1	1
Newark,	7	2	5	5	5	9	10	9	8	5
New York City,	4	5	.....	6	3	5	6	8	7	3
Passaic,	9	9	7	8	10	12	13	12	11	8
Paterson,	12	10	9	12	12	14	14	4	13	.....
Plainfield,	.....	.....	.....	3	4	.....	2	2	2	6
Rutherford,	.....	.....	.....	.....	15	6	7	3	.....	.....
Trenton,	8	8	.....	10	8	10	12	11	7	7

Where blank spaces are left, data are not available.

A summarization of the facts covering the costs per pupil in average daily attendance is shown in Table VIII, where Hackensack's cost on the basis of this unit is compared with the median cost in the 31 selective cities of Group I and the 15 cities of Group II. Hackensack has deemed it necessary to pay more than the median cities in each of these two groups. Hackensack is to be congratulated upon having made this expenditure, since good results are evident throughout the school system, as reported elsewhere in this study.

TABLE VIII

THE EXPENDITURE FOR SCHOOL MAINTENANCE PER PUPIL IN AVERAGE DAILY ATTENDANCE IN HACKENSACK COMPARED WITH THE MEDIAN OF SUCH EXPENDITURES IN TWO GROUPS OF CITIES—1908 TO 1920

YEAR	GROUP II Median Cost per Pupil in Average Daily Attendance	HACKENSACK'S Cost per Pupil in Average Daily Attendance	GROUP I Median Cost per Pupil in Average Daily Attendance
1908–1909, ...	$43.00	.....	$30.02
1909–1910, ...	46.98	.....	31.11
1910–1911, ...	46.87	$45.15	31.25
1911–1912, ...	47.50	58.75	32.54
1912–1913, ...	43.05	56.87	33.07
1913–1914, ...	52.13	61.71	36.36
1914–1915, ...	53.71	60.68	38.58
1915–1916, ...	56.62	59.90	38.21
1917–1918, ...	60.32	53.06	43.41
1919–1920, ...	73.50	98.11	59.47

Supplementary tables, showing the total expenditures for maintenance, the number of pupils in average daily attendance, and the cost per pupil in average daily attendance for the cities of both groups are included in the appendix of this report.

In Table IX are shown such other financial facts as the bonded indebtedness for schools, the value of school buildings, the bonded indebtedness per capita, and the bonded indebtedness per pupil in average daily attendance. Both groups of cities are included in this table. It should be very gratifying for the patrons of the schools in Hackensack to know that they have furnished school buildings for their children which rank in value at the top among the school plants of these cities. The ranks of the cities on each of these four items are also included in the tables of the appendix.

TABLE IX

THE BONDED INDEBTEDNESS AND VALUE OF SCHOOL BUILDINGS FOR HACKENSACK AND THE OTHER CITIES OF GROUPS I AND II

(Also Shown on Unit Basis)

NAME OF CITY	Bonded Indebtedness for Schools		Value School Buildings		Bonded Indebtedness per Capita		Value School Buildings per Pupil in Av. D. A.	
	Amount	Rank	Amount	Rank	Amount	Rank	Amount	Rank
GROUP I								
Ansonia, Conn.,	$25,000	28	$300,000	21.5	$1.42	28	$98.70	22
Asbury Park, N. J.,	.....	.....	.....	.....	.....	.....	.....	.....
Bloomfield, N. J.,	501,000	5	1,410,000	4	2.27	25	.....	.....
Bridgeton, N. J.,	43,200	23	300,000	21.5	3.02	22	128.53	18
Carlisle, Pa.,	94,000	17	401,100	17	8.58	15	233.01	13
Clinton, Mass.,	32,000	26.5	266,335	24	2.46	24	156.21	15
Concord, N. H.,	189,000	12	1,000,000	6	8.53	16	441.90	3
Dunkirk, N. Y.,	167,000	14	991,250	7	8.64	14	372.51	5
Englewood, N. J.,	610,500	4	1,117,780	5	52.90	2	.....	.....
Franklin, Pa.,	72,000	21	436,000	16	7.23	18	325.62	7
Gardner, Mass.,	178,000	13	188,000	27	10.50	12	71.32	23
Glen Falls, N.Y.,	106,000	16	400,000	18	6.38	19	244.65	12
Gloucester, Mass.,	83,000	19	449,000	15	3.62	21	106.15	21
Hackensack, N. J.,	*706,000*	*3*	*1,765,110*	*2*	*40.00*	*3*	*536.95*	*1*
Hornell, N. Y.,	40,000	24	292,972	23	2.67	23	108.38	20
Landsford, Pa.,	215,000	11	330,000	20	22.30	6	281.29	10
Lehanon, Pa.,	323,500	6	827,179	8	13.13	8	244.72	11
Little Falls, N. Y.,	66,000	22	560,000	12.5	5.07	20	315.15	9
Marlboro, Mass.,	32,000	26.5	.....	.....	2.13	26	.....	.....
Millville, N. J.,	166,700	15	260,000	25	11.30	11	115.68	19
Montclair, N. J.,	2,200,000	1	2,423,550	1	76.30	1	463.66	2
Olean, N. Y.,	295,000	7	.....	.....	14.40	7	.....	.....
Phoenixville, Pa.,	76,900	20	500,000	12.5	7.33	17	321.33	8
Plainfield, N. J.,	803,000	2	1,464,075	3	29.00	5	346.79	4
Rutherford, N. J.,	294,190	8	669,900	10	30.90	4	.....	.....
Saratoga Sp'gs, N. Y.,	24,000	25	606,665	11	1.82	27	342.14	6
Shamokin, Pa.,	248,200	10	750,000	9	11.70	10	213.16	14
Sharon, Pa.,	256,000	9	454,500	14	11.80	9	132.39	17
Tyrone, Pa.,	93,000	18	234,000	26	10.30	13	145.90	16
Weymouth, Mass.,	.....	.....	381,000	19	.....	.....	.....	.....
GROUP II								
Asbury Park,	.....	.....	.....	.....	.....	.....	.....	.....
Bloomfield,	$501,000	8	$1,410,000	10	$2.27	9	.....	.....
East Orange,	.....	.....	2,138,743	5	.....	.....	$318 97	4
Elizabeth,	.....	.....	1,588,775	8	.....	.....	134.95	8
Englewood,	610,500	7	1,117,780	11	52.90	2	.....	.....
Hackensack,	*706,000*	*6*	*1,765,000*	*7*	*40.00*	*3*	*536.95*	*1*
Jersey City,	.....	.....	9,163,826	2	.....	.....	213.44	5
Montclair,	2,200,000	2	2,423,550	4	76.30	1	436.66	2
Newark,	10,019,200	1	9,770,450	1	24.18	6	152.36	7
New York City,	.....	.....	.....	.....	.....	.....	.....	.....
Passaic,	1,208,250	4	1,943,225	6	18.98	7	195.10	6
Paterson,	.....	.....	2,918,000	3	.....	.....	.....	.....
Plainfield,	803,000	5	1,464,075	9	29.00	5	346.79	3
Rutherford,	294,190	9	669,900	12	30.90	4	.....	.....
Trenton,	2,004,350	3	.....	.....	16.80	8	.....	.....

Another basis for reckoning costs is according to the number of possible days' attendance and the total actual days' attendance. In Table X, the expenditures per pupil on these two unit bases are given. These expenditures show little fluctuation over the period 1912 to 1918; the average expense for school maintenance per pupil per day on the basis of the total possible days' attendance being between 28 and 29 cents. In 1920 this had increased to 46 cents. The increase is graphically represented in Chart 1. This increase has been due to war conditions and has occurred in all other phases of economic development. The lowering of the costs in 1918 to 26 cents per pupil per day of possible days' attendance and to 28 cents per pupil per day in actual days' attendance shows that Hackensack's educational program was being developed with the idea of keeping the unit cost at a reasonably low point.

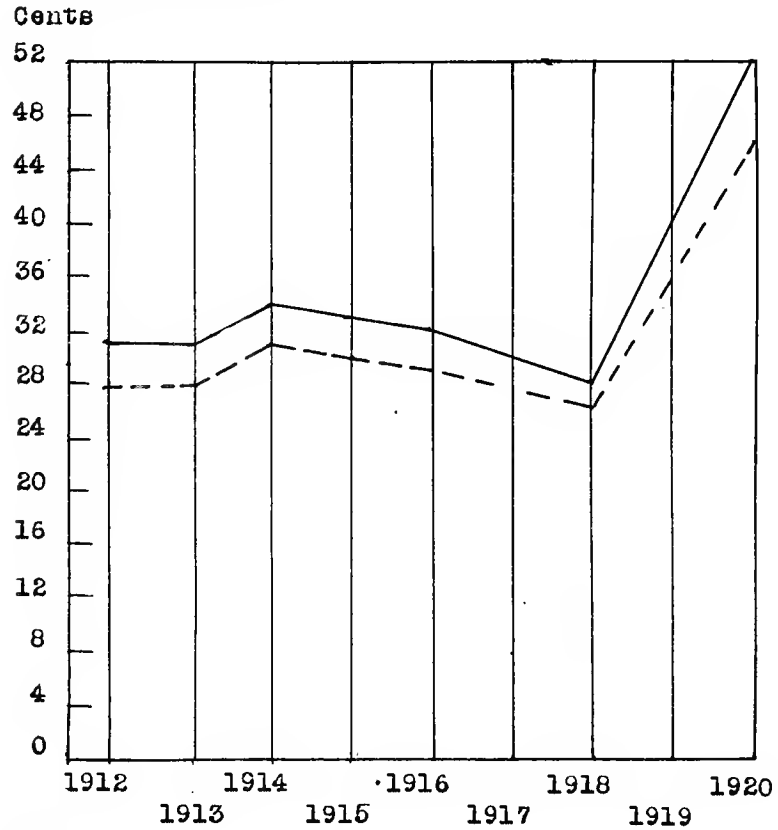
TABLE X

EXPENDITURES PER PUPIL ON TWO UNIT BASES

YEAR	Expenditure for School Maintenance	Total Possible Days' Attendance	Total Actual Days' Attendance	Expenses for School Maintenance per Pupil per Day on the Basis of Total Possible Days' Attendance	Expenditure for School Maintenance per Pupil per Day of Total Actual Days' Attendance
1912, ...	$154,454	544,530	490,274.5	.28	.31
1913, ...	154,987	558,693	504,216	.28	.31
1914, ...	170,432	558,150	505,459.5	.31	.34
1915, ...	179,079	590,954	545,982	.30	.33
1916, ...	170,761	594,577.5	531,239.5	.29	.32
1918, ...	158,015	613,939.5	556,816.5	.26	.28
1920, ...	322,392	699,214.5	621,019.5	.46	.52

CHART No. 1

COMPARISON OF COSTS PER PUPIL PER DAY ON THE BASIS OF ACTUAL AND POSSIBLE ATTENDACE, HACKENSACK PUBLIC SCHOOLS, 1921



Legend:

Solid line: Cost per pupil per day of actual attendance.
Dotted line: Cost per pupil per day of possible attendance.

It is clear from these studies of the cost of education in Hackensack and in other places that the cost at Hackensack is high, but not excessive. It is also clear to the Survey Commission that Hackensack is getting adequate returns in educational service and in the progress of its school children for every dollar which is being expended on the schools. In order to

maintain the high standards which now prevail in Hackensack, it will be necesary to continue to pay the cost. Good education, like other things that are worth while, can only be secured through the establishment of high standards and the payment for the service which will maintain such high standards. Hackensack has already realized the need for keeping the standards high and has paid the costs, as is evidenced from the preceding tables.

Hackensack Survey Index.

Accounting, fiscal, 17, 18.
Administration, 9, 10, 11.
Age Grade, distributions, 139, 140, 142.
Algebra, Hotz, 122–125.
Arithmetic, Woody tests, 102–113;
Courtis tests, 113–119;
Stone test, 119–122.
Attendance, 19; average daily, 133–136; High school graduates at college, 167.
Auditoriums, school, 66, 67.
Bathing, 46, 47, 48.
Blackboards, heights, 54, 55, 56, 57.
Board of Education, committees, 10, 11.
Budget, school, 17, 18.
Buildings, supervision, 14, 15; score card, 27, 28, 29; scores, 31; comparisons, with other cities, 32; dates of erection, 36; size, 38, 39; cleaning, 44; lighting, 44, 45; value, 224; program, 19–22.
Classes, size, 196–198.
Classrooms, scores, 49; standards, 50; dimensions, 51, 52; seating, 57, 58; color scheme.
Cloakrooms, classrooms, 59.
Composition, Quality of, 90–97; Nassau County Supplement, 90–92; grade scores, 95, 96; comparisons, 97.
Costs, current expense, 217, 218; maintenance, 219–224; per pupil unit bases, 225–227.
Course of Study, 204–207; success, 206; industrial arts, 209–211.
Discipline, 204.
Drinking facilities, 45, 46.
Electric service, 48.
Enrollment, school, 133–137; high school, 155–159.
Expenditures, current, 216–218; per capita, 218.
Failures, high school, 163–166.
Finance administration, 17–18.
Fire protection, 42, 43; exits, 52; escapes, 43.
Grade Progress records, 143–150.
Grounds, play, 32–36.
Gymnasiums, 65.
Handwriting, quality, 85–90; scores by grades, 87; scores by ages, 88, 89.
Heating systems, 41, 42.
High School, enrollment, 155–159; number of graduates, 159–162; elimination by courses, 160; individual differences, 162–166; failure by subjects, 164; pupil load, 166; extra curricular activities, 166, 167; graduates attending college, 167.
Illumination, artificial, 44, 45, 58, 59; natural, 53, 54; standards, 54.
Indebtedness, bonded, 224.
Industrial arts department, 209–211.
Instruction, quality, 200–202; outline for judging quality, 201, 202; kinds, 203, 204.

Janitor, rooms, 68, 69; service, 14, 15.
Laboratories, school, 69.
Latin, Henmon scores, 125–128.
Libraries, 66, 67.
Lighting, artificial, 44, 45, 58, 59; natural, 53, 54.
Lunch room, 67.
Manual, school, 17.
Non-promotions, 151, 152.
Office, management, 15; records, 15, 16, 17; rooms, 67, 68.
Over-age children, 139–143, 148.
Playground, standards, 32; areas per pupil, 33, 34, 35.
Population comparisons, 215, 216.
Program, building, 19, 20, 21, 22; educational, 207–209.
Progress, school, 143–149.
Promotions, double, 151, 152; reasons for non-promotions, 150–153.
Pupils, distribution by grades, 136; distribution by ages, 137.
Questionnaire, teachers, 191.
Reading, silent, 75–85; grade scores, 78, 79; age scores, 80–85.
Records, reports, 15, 16, 17.
Salaries, teachers, 173–187.
Score Card, Strayer-Engelhardt, 28, 29.
Scores, age; silent reading, 80–85; handwriting, 88–90; spelling, 100–102; Courtis Arithmetic, 117–119; Woody Arithmetic, 112, 113.
Scores, building, 27–70.
Scores, grade; silent reading, 78, 79; handwriting, 87, 88; spelling, 98, 99; Courtis Arithmetic, 113–117; Woody Arithmetic, 102–112; Stone Arithmetic, 119–121; Algebra, Hotz, 122–125; Latin, Henmon, 125–128.
Seating, classroom, 57, 58.
Service systems, 39, 40.
Showers, school, 48.
Sites, school, 34.
Sizes, class, 196–198.
Special rooms, 61; standard provisions, 62, 63, 64; playrooms, 64, 65; auditoriums, 65, 63; libraries, 66, 67; lunch room, 67; officers, 68; teachers, 68; janitors, 68; laboratories, 69.
Spelling, 97–103; age scores, 100–102; grade scores, 98, 99.
Statistics, school, 18.
Structure, 36–39.
Students, non-resident, 162.
Supervision, 207.
Supplies, 18.
Tardiness, total cases, 135.
Teachers, professional training. Growth, 13; resignations, 14; rooms, 68; teaching load, 166; size of staff, 171; salaries, 173–181; experience, 181–186; age of teachers, 187–189; training, 174; sources of supply, 189, 190; degrees and diplomas, 190, 191; teachers reading, 192, 193; problems, 194; aids to improvement, 194, 195; difficulties in school work, 195, 196; cost of living, 198–200; personality, 202, 203.
Text-books, 18, 19.
Toilet facilities, 47, 48.
Transfers; age grade, data, 142; grade progress data, 143–144.
Urinals, 48.
Ventilation, 41, 42.
Washbowls, number, 47.
Washing, bathing, 46, 47.
Water supply, 45, 46.
Windows, location, 53, 54; area, 53, 54
Withdrawals, 153, 154.